

Cost reduction on site – Some new thoughts on an old subject

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**This article first appeared in 'National Builder', July/August 1981 and is re-printed by kind permission*

If you stand in the street and attempt to give away away £5 and £10 notes you will not find it easy, people are suspicious and wary of taking your money. But the construction industry throws away money at every stage of a contract. Oh yes, we recover monies in other areas and by other means, but if we could also 'construct' more effectively and reduce the amount of money thrown away, then we would become more profitable and more competitive.

Building within the net cost estimate, attempting to reduce or contain the total costs of construction—it is an old subject but in today's economic climate it has become a very important subject if companies are to survive.

On most contracts, large or small, the actual costs of carrying out the work on site, as against the cost estimate figures, fluctuate markedly; some sections or trades are completed at below estimated cost, and others above. In the same way site on-costs and company overhead costs also fluctuate above and below the estimated figures.

An increasing number of contractors are looking hard, and with fresh eyes at these fluctuating actual costs incurred and, whether or not the cost estimate was accurate in the first place, are attempting to contain or reduce costs in those areas of a contract over which they have most control, and which are of significant value.

BAS is also looking in detail and with fresh eyes at the 'total concept of carrying out work' and 'controlling and auditing that

work'. We are developing a service in two main areas:—

In-company advice and assistance on identifying areas of potential cost reduction, and establishing an on-going company cost reduction programme.

Training courses, both public and in-company, outlining the philosophy and detailing the steps in setting up cost reduction programmes.

This article outlines the practical steps contractors are taking to:

Re-assess their working methods, and particularly the use of 'service' labour and plant.

Ensure all company procedures are effective and geared towards giving site a service.

Channel both site and head office management effort to suit the contract.

Examine the priorities of organising, managing and controlling work in changing conditions.

Involve and train staff and labour to become a more effective team.

It is also concerned with the basic objective of reducing site construction costs, whether direct or indirect, and establishing a company cost reduction programme.

A company preparing to start a new contract would, in effect, add another dimension to its normal pre-contract and on-site procedures by establishing the 'Cost Reduction Objectives' for the contract and indeed for all contracts.

Cost reduction objectives

A typical company programme can be outlined as including:

A company decision and policy to

implement a cost reduction programme and communicate this fact to all staff.

The setting up of a staff audit team to audit existing costs in various fields in order to establish prospective areas of cost reduction, a programme of implementation, and control procedures.

Involvement, consultation and co-operation of all departments and staff at all stages, with particular emphasis on objective involvement across departmental and functional boundaries.

Pilot work, if necessary, to prove the potential of the programme, and ensure the practical working of the audit team.

Training and indoctrination of staff, own sub-contractors if possible, and others throughout the programme.

The establishment and absorption of the cost reduction and audit approach into the company's procedures.

This programme can be undertaken by the small contractor as well as by the large. In practice the small contractor has to limit his objectives at any one time consistent with company and staff workload, but the potential savings are as much there to be 'made' as they are for the large contractor.

What is this new dimension, and in which areas should a company examine its existing working methods and procedures?

Over the past decade the emphasis in planning, organising, co-ordinating and controlling work on site has been on obtaining the most effective use of 'production' labour.

Progress, keep on programme, get the materials to the tradesman—these have been the key objectives. But in recent years, and mainly due to inflation, the situation with regard to other broader or total aspects of work has been increasing in importance. The costs of servicing a gang effectively are as important as the gang's own production costs!

Areas for cost reduction

It is said that work is split into three stages:

Preparation, and this includes providing all resources necessary at the right time and place.

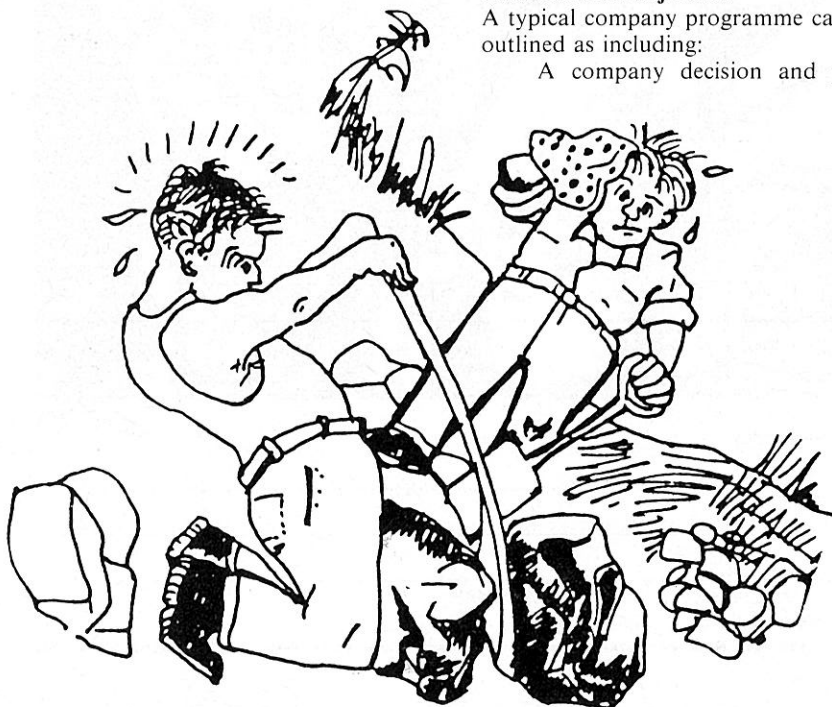
'Do' the work on production.

Put away, protect, hand over the work.

It is also said—and construction companies are beginning to prove it—that potentially, the greatest areas for cost reduction and more effective construction are in the first and last above or, put another way:

The administrative functions of buying, contracts management, plant service, planning, co-ordination, etc.

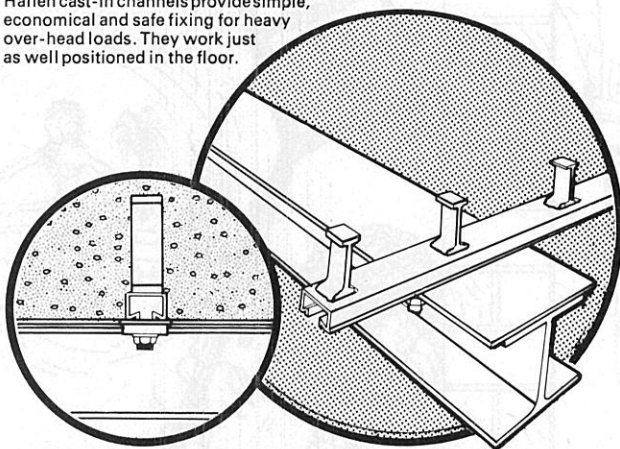
The service facilities or site on-costs provided and their utilisation.



HOW DO YOU...?

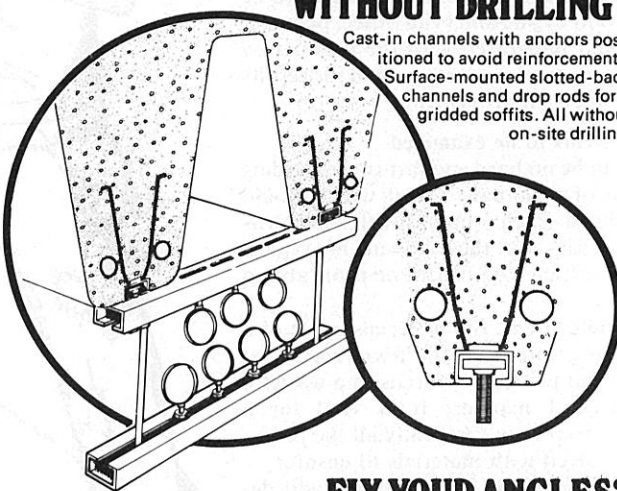
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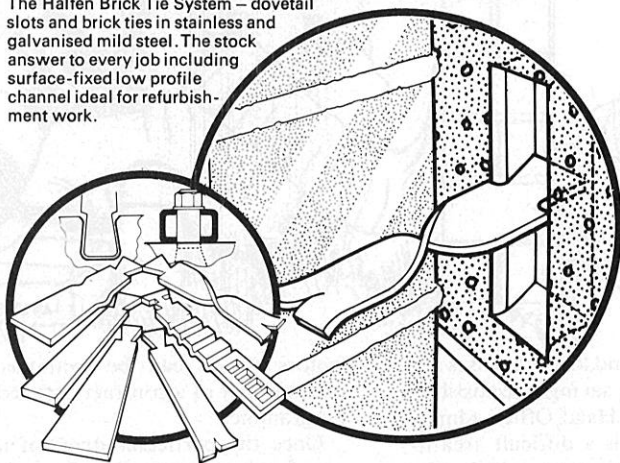
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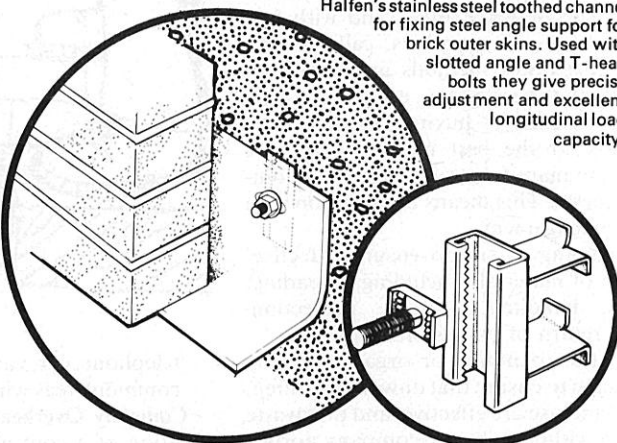
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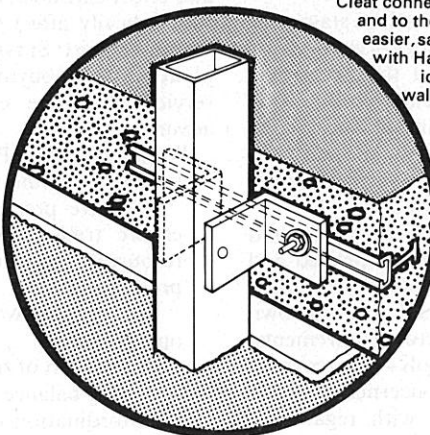
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COST REDUCTION

The site management of work, the priorities of action and the appreciation of where the time cost lies.

These will determine, to a large extent, the effectiveness of production work.

The items 'Preparation' and 'Put Away' add cost to work, but only indirectly add value. The direct cost effect of not providing the right method of unloading a certain material may appear small, but the knock-on effect of material waste, extra labour and, possibly, slowed production produces an excess cost out of all proportion to the original cost decision. In other words, the true areas of cost and the marginal effects of decisions affecting a contract require to be understood by site and head office; planned, costed and integrated with the production work; monitored at all stages and the results used to effect improvements.

Typical items to be examined

There can be no hard and fast rule regarding the areas of a company's work which should be examined. Each company will establish its own priorities, but the following are typical examples which BAS has found profitable to examine:

Materials Often, the materials value of a contract is greater than the labour value, yet we still tend to treat materials in a wasteful and off-hand manner. It is vital for a company to review constantly all the procedures involved with materials to ensure:

Correct drawings, specifications and details. Accurate requisitions, whether undertaken at site or head office, and with full, planned details of quantities, call-offs, delivery instructions, methods and details of loading, handling, storage, etc.

Practical action by buying to translate the requisition in the best manner to ensure supplier or manufacturer acts as the company requests. This means close liaison with the site management.

Pre-planning at site to ensure 'effective' reception of materials, including unloading, methods, handling, storage, protection, security, return of pallets or similar.

Production planning or organisation by the site team to ensure that onward handling, stacking and use are effective, and that waste levels are within or below company norms.

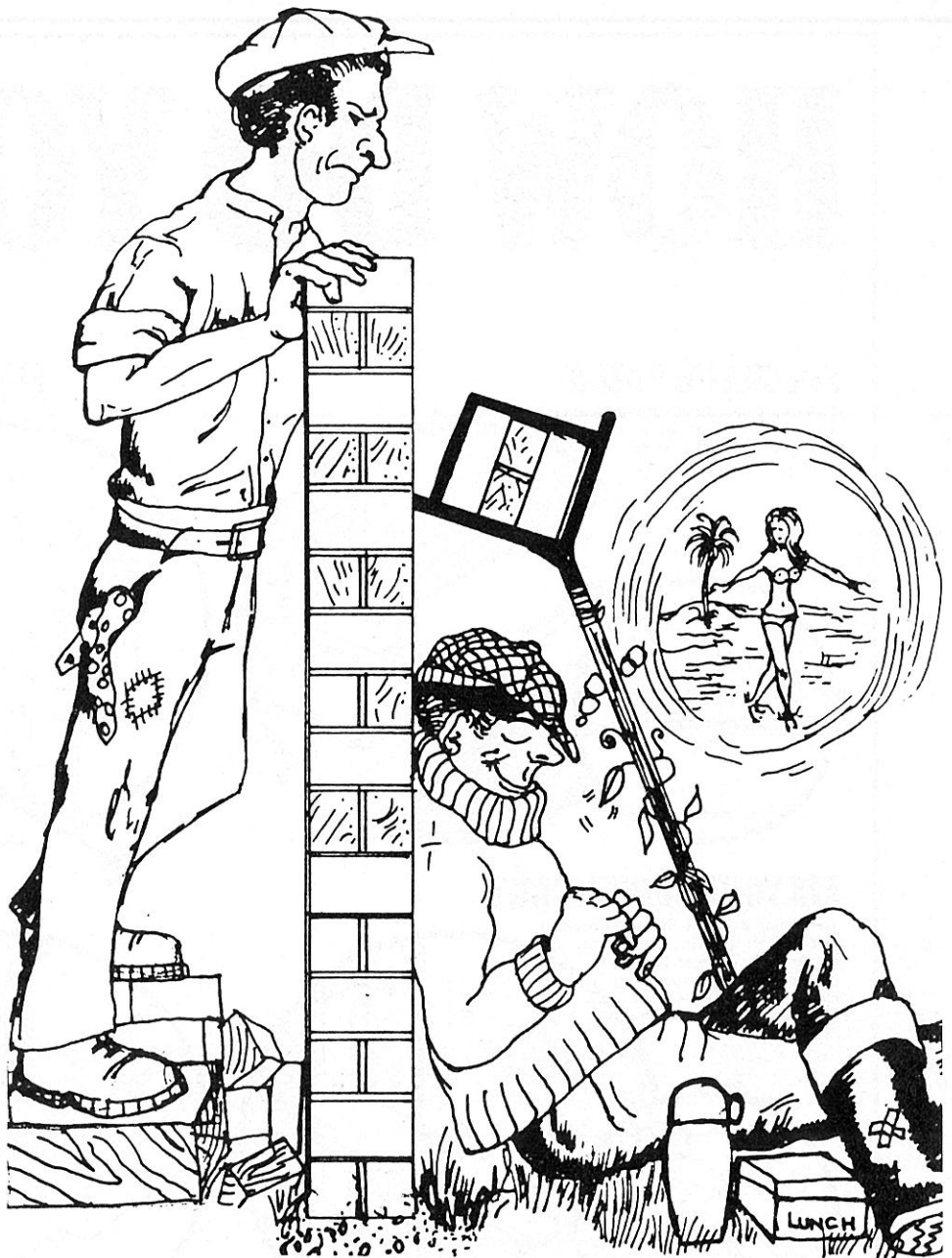
Site On-Costs The relationship of the requirements for a contract with the actual productive work:

Supervision needs at various stages of a contract, and the priorities of supervision time to the demands of the site at any particular moment. Is supervision aware of all the areas of cost importance on the job? On occasions it is necessary to increase supervision in order to reduce or contain construction costs.

Site layout, material storage areas and security—the need must be proved and integrated with the value of resources concerned, handling methods, and own labour and sub-contractor requirements.

Plant and small tools—the correct plant to do the job concerned and its utilisation, particularly with regard to idle time and the sequence of work.

Administration costs of setting up and maintaining a site. Fuel, heat, light,



telephone, car, van and lorry expenses are common areas where savings are possible.

Company Overheads Head Office administration of a contract is a difficult area to keep within cost, and over which site management has little control. Yet the time and effort expended or not in servicing a site can radically affect whether the site builds within net cost. Surveying, planning, bonus, plant, costing, buying are functions whose service to a site can be reviewed with advantage.

Working Methods Particularly on repetitive and multi-discipline work.

Effective preparatory organisation to ensure tradesmen and gangs have the resources to produce and minimise non-productive time.

Sequence of work best suited to that operation.

Integration of trades working together and gang balance.

Co-ordination of sub-contractors and their working methods.

The above items are only examples, and there are countless operations and

factors which can be examined, and become part of a contract cost reduction programme.

Once the particular items of importance for that contract have been identified they become part of and 'an item on the agenda' for all the normal planning, organising and controlling procedures of that site.

It is important to emphasise that the discipline of setting and fulfilling cost reduction objectives is an extension of a company's normal working procedures and methods and not a substitute for existing practices. However, no aspect of a company's contract procedures should be inviolate, and all departments and practices should be open to examination and improvement.

Effective implementation

Any new procedure, any examination of established ways of working involves people, and to be successful requires consideration of those people.

A cost reduction programme is no excep-

tion and requires that staff look closely at long-established routines and procedures. It is essential, therefore, that all staff understand what is happening and why, and are allowed to participate.

To be effective a cost reduction programme requires a company to:

- Have top management backing and involvement at all stages.

- Ensure a willingness on behalf of staff to be involved, and that they are briefed correctly.

- Develop procedures and a team concept to cope with a cost reduction programme.

- Set objectives, ensure they are acted upon and control the results. Also ensure that improvements and savings in one area or on one site become company savings.

- Maintain a flexibility of approach to suit changing conditions on various contracts.

- Realise that in today's market and working conditions there is probably greater scope for potential cost reduction in the areas leading up to the actual productive work, whether these are on site or in head office.

The actual labour and plant effort and skill in producing value at the work face may not be the most important cost factors. Often it is the many factors prior to 'incorporation in the works' that add cost to the operation but do not add value.

Cost factors

The train of events which results in excess costs being incurred on site may have been set in motion by actions—or the lack of them—made weeks or months beforehand. Therefore, to reduce or contain costs on site it is necessary to look at all the functions and departments concerned in a contract.

Recently, a company discovered through its historical costing system that the costs of certain bricks on a site were excessive. They investigated on site and worked back to head office. The results showed excess wastage on site, caused partly by inadequate requisitioning, buying and delivery procedures. Now the company is reviewing and improving its entire materials policy, and buying and site material procedures.

BAS believes there are opportunities for contractors. We have been involved in various cost reduction exercises, such as materials waste, but always these exercises have been in isolation to the normal com-

pany working. Now we are very aware that there is a need for a formal and integrated programme, based on a positive system of cost audit procedures, in addition to existing well tried procedures. From our experience it should be possible to make savings of between two and five per cent on the material purchases alone of a contract, and at relatively little cost. For example, if the materials purchased cost £100,000 then the saving could be some £2,000–£5,000, and this is before savings on labour and plant used are attempted.

We are, therefore, mounting a two-day course to put forward the ideas outlined in this article. This course will be mounted at various central locations throughout the country, and the content will include—a practical review of the many areas of cost which can be examined to advantage; advice on how a company can plan, set up and administer a cost reduction programme; practical examples taken from contract situations.

Alternatively, BAS would be happy to mount in-company courses, adapted to suit individual clients, for contractors, sub-contractors and group training organisations, and all enquiries should be addressed to the Training Manager.

