Clause 13

Summary

Sub-Clause 13.1 deals with the right of the Engineer to vary the Contract. This right can be exercised at any time up to the issue of the Taking-Over Certificate. Sub-Clause 13.2 deals with value engineering and permits the Contractor to propose a change which will benefit the Employer. The proposal is prepared at the cost of the Contractor, who designs the change. Sub-Clause 13.3 deals with the procedure prior to the Engineer instructing a variation. The Engineer may request a proposal from the Contractor. However, while the Contractor is preparing the proposal it must proceed with the works.

Sub-Clause 13.4 deals with payment in applicable currencies. Sub-Clause 13.5 deals with Provisional Sums and ought to be read with Sub-Clause 1.1.4.10 which defines Provisional Sum as follows:- "a sum (if any) which is specified in the Contract as a provisional sum, for the execution of any part of the Works or for the supply of Plant, Materials or services under Sub-Clause 13.5 [*Provisional Sums*]." The Provisional Sum can only be used where there is an Engineer's instruction and the Contractor receives payment for only the work done to which the Provisional Sum relates. Sub-Clause 13.6 deals with daywork. This is where work of a minor or incidental nature is to be carried out. The work is then valued in accordance with the Daywork Schedule in the Contract or if there is no Daywork Schedule then the alternative method of payment as prescribed in the Contract.

Sub-Clause 13.7 deals with the Cost arising from changes in the Laws of the Country which affect the Contractor in performance of his obligations under the Contract. Where the Contractor suffers delay or additional Cost then it must give notice under Sub-Clause 20.1 of the Contract. Sub-Clause 13.8 deals with adjustments for changes in cost. This Sub-Clause only applies where the "table of adjustment data" included in the Appendix to Tender has been completed. If the Sub-Clause does apply then the amounts payable to the Contractor for rises and fall in the cost of the Works are adjusted by a formula.

Origin of clause

The right to vary work was found in Clause 51 of the Red Book 4th edn and 3rd edn. There are, however, substantial differences. In particular the clarification in Clause 51.2 regarding an increase or decrease in quantities has been omitted from FIDIC 1999. This is a retrograde step. Sub-Clause 13.2 (Value Engineering) is a new clause – although it had been included at Sub-Clause 14.2 of FIDIC's Orange Book. Sub-Clauses 13.3 and

13.6 were found at Clause 53 of the Red Book 4th edn. Once again these clauses have been substantially changed.

Sub-Clause 13.4 is a new clause, although currency proportions were dealt with at Clause 72 of the 4th edn. Sub-Clause 13.5 has its origins in the 3rd edn of the Red Book and is found at Clause 58 of the 4th edn. One complaint regarding Clause 58 in the FIDIC 4th edn was that there was no definition of Provisional Sum; this has been rectified in FIDIC 1999. Sub-Clause 13.7 is similar to Clause 70.2 of both 3rd edn and 4th edn Red Books. Sub-Clause 13.8 was previously found at Clause 70.1 of the 4th edn Red Book, in a much simplified form.

Cross-references

References to Clause 13 or Provisional Sum are found in the following clauses:-

- Sub-Clause 1.1.4.10 (Definitions – Provisional Sum);
- Sub-Clause 1.1.6.9 (Definitions – Variations);
- Sub-Clause 3.3 Instructions of the Engineer;
- Sub-Clause 4.11 Sufficiency of Accepted Contract Amount;
- Sub-Clause 4.12 Unforeseeable Physical Obstructions;
- Sub-Clause 5.1 Definition of "nominated Subcontractor";
- Sub-Clause 5.3 Payments to nominated Subcontractors;
- Sub-Clause 7.4 Testing;
- Sub-Clause 8.3 Programme;
- Sub-Clause 8.4 Extension of Time for Completion;
- Sub-Clause 8.11 Prolonged Suspension;
- Sub-Clause 11.2 Cost of Remedying Defects;
- Sub-Clause 12.3 Evaluation;
- Sub-Clause 14.1 The Contract Price;
- Sub-Clause 14.3 Application for Interim Payment Certificates;#
- Sub-Clause 14.9 Payment of Retention Money; and
- Sub-Clause 14.15 Currencies of Payment.

Sub-Clause 13.1 Right to Vary

This Sub-Clause gives the Engineer the right at any time prior to the issue of the Taking-Over Certificate to initiate a Variation either by an instruction or by a request for the Contractor to submit a proposal.

The Contractor is obliged to carry out every Variation unless he cannot readily obtain the Goods required for the Variation.

Variations may include

(a) changes to quantities;
(b) changes to quality or other characteristics;
(c) changes to levels positions or dimensions;
(d) omission of work unless it is to be carried out by others;
(e) any additional work Plant Materials or services necessary for the permanent Works including tests; or
(f) changes to the sequence or timing of the Works.

The Contractor may not make any alteration or modification of the Permanent Works unless a Variation has been ordered. The power to vary is an essential part of every construction contract but the scope of the power to vary differs considerably between different forms. Sub-Clause 13.1 confers a very wide power and it will only be in unusual circumstances that the Contractor will not be obliged to follow a variation instruction.

There is no useful definition of the term "Variation". The definition in Sub-Clause 1.1.6.9 is not very helpful:

> "'Variation' means any change to the Works which is instructed or approved as a variation under Clause 13 *[Variations and Adjustments]*'"

This at least makes it clear that any instruction about the Works not instructed or approved as a variation under Clause 13 is not a Variation. This has implications when an Engineer issues an instruction under Sub-Clause 3.3. Sub-Clause 3.3 attempts to deal with this by stating that

> "If an instruction constitutes a variation, Clause 13 [*Variations and Adjustments*] shall apply"

Thus it seems that contrary to Sub-Clause 1.1.6.9, a Variation is not only a change to the Works instructed under Clause 13 but may also be instructed under Sub-Clause 3.3.

For an instruction to amount to a Variation the Contractor must act on it. In *Obrascon Huarte Lain SA v HM Attorney General for Gibraltar*[1] the Engineer issued a document entitled draft fill guidelines, which gave directions about undertaking certain works, which if implemented would have amounted to a Variation. The Contractor, however, chose not to act upon the draft fill guidelines when removing contaminated material from site and dealt with the contaminated material by another accepted method. The Court of

[1] [2015] EWCA Civ 712

Appeal therefore stated: "Accordingly the issue of the draft fill guidelines did not constitute a variation instruction."

In the normal course of virtually every construction contract the Engineer will give instructions which he wishes to be treated as being entirely within the scope of the Contract and thus not a Variation. However one of the most common causes of dispute between the Contractor and the Engineer and the Employer, is the Contractor's belief or assertion that this instruction in fact takes him outside the scope of his obligations and is thus a variation.

Although it is not a standard term, it is very common for Employers to include a particular condition in contracts which limits the Engineer's authority to instruct a variation. If the Contractor is aware of this limitation (as he almost always is) he is not obliged to follow an instruction which he considers to be a variation unless the Engineer can demonstrate that he has the required authority to issue it.

One of the most common disputes under construction contracts is where the Contractor and the Engineer differ on whether a particular instruction is or is not a variation. If the Contractor considers that the instruction constitutes a Variation he will make an application for payment on that basis, and, if the Engineer refuses to pay, the issue will become a matter for dispute. The Contractor is required to follow the Sub-Clause 20.1 [*Contractor's Claims*] procedure.

Where, as is common, the Engineer issues an instruction, believing it to be a simple instruction and not a Variation but it is subsequently shown to be a Variation, but the Engineer had no authority to do so because of a limitation imposed by a Particular Condition in the Contract, the Contract provides no clear solution.

The Employer can argue that, under Sub-Clause 13.1, the Contractor is expressly forbidden from carrying out a Variation unless there is a variation order. Whatever the Engineer may have done, he did not issue a variation order as that was outside his authority. The Contractor will argue that he acted in good faith by following an instruction which, at the time, the Engineer clearly considered to be within his authority. Indeed at the time the Contractor may not have realised it was a variation.

An example of this is the following:

In a road rehabilitation project a particular condition forbad the Engineer from issuing a Variation Order without prior approval from the Employer. The design of the project required the contractor to level the existing seriously degraded pavement and then to place a well graded capping layer both over any exposed sub-surface material and over any remaining original pavement. The design assumed that the sub-surface material had

good bearing qualities. Once excavation started it began to become apparent that the sub-surface material was of very poor bearing quality and that it would be necessary to replace much of the capping layer with a crushed rock material. Such material was already specified for soft spots and the Engineer initially ordered greater quantities of the soft spot material. Eventually this became the main material to be used in place of the capping material for a large part of the road. In hind-sight it was clear that this amounted to a variation, but at the time it merely appeared to be an instruction to use one item rather than another to resolve what initially seemed to be an isolated problem. In reality there was a Variation, but the Engineer had acted under Sub-Clause 3.3 without being aware of this and had never sought or received the Employer's permission.

Thus the Employer was in a position to argue that the Contractor had been obliged not to carry out the Engineer's instruction and the Contractor wanted to argue that what was originally merely an instruction became, because of the accumulation of such instructions, a variation.

The outcome of such a situation will depend on the law of the Contract but in all probability the Contractor will succeed regardless of the limitation on the Engineer's powers. Under English law the Contractor would argue that, once the Engineer issued the instruction and repeated it several times without intervention from the Employer, the Employer would be estopped from denying that there had been a variation. A different version of this would be that, having become aware of the repeated instructions by the Engineer without intervening, the Employer had waived his right to rely on the limitation of the Engineer's instructions. Under many systems of law the Contractor would succeed on the basis that to require him to do the extra work would effectively unjustly enrich the Employer. In other words the limitation on the Engineer's powers in these circumstances will be largely ineffective at least in respect of instructions which were not consciously intended to increase the scope of the Works.

Even in those situations where the Instruction is unambiguously intended to be a Variation, the Contract is not explicit as to what is required before the Contractor is entitled to payment or to an appropriate extension of time. There is no special procedure for payment or extensions of time under Sub-Clause 13.1 and, in the absence of an exception to the general provision of Sub-Clause 20.1 [*Contractor's Claims*] the Contractor will be required to give notice of claim in order to establish his entitlement to an extension of time. However this does not apply to the right to additional cost as the Contractor is not making a claim but is simply entitled to payment for the varied works.

Although the Engineer has power to issue a Variation instruction, the Contractor is not always bound to obey it. There are not many limits to the Engineer's power to issue a variation but we discuss these below (see heading "Scope of Variation").

Even if the Variation instruction is within the Engineer's authority under the first paragraph of Sub-Clause 13.1 there are limits on the Contractor's obligations to carry out the Variation. These are set out in the second paragraph of Sub-Clause 13.1:

> "The Contractor shall execute and be bound by each Variation, *unless the Contractor promptly gives notice the Engineer stating (with supporting particulars) that the Contractor cannot readily obtain the Goods required for the Variation.* Upon receiving this notice the Engineer shall cancel, confirm or vary the instruction."

To fully understand the implications of this sub-paragraph it is necessary to refer to the following definitions

Sub-Clause 1.1.5.2 which reads:

> '"G**oods**" means Contractor's Equipment, Materials, Plant and Temporary Work or any of them as appropriate.'

Sub-Clause 1.1.5.1 which reads:

> '"**Contractor's Equipment**" means all apparatus, vehicles and other things required for the execution and completion of the Works and the remedying of any defects. However Constructor's Equipment excludes Temporary Works, Employer's Equipment (if any), Plant, Materials and any other things intended to form or forming part of the Permanent Works.

Sub-Clause 1.1.5.3 which reads:

> "**Materials"** means things of all kinds (other than Plant) intended to form or forming part of the Permanent Works, including the supply-only materials (if any) to be supplied by the Contractor under the Contract.

Sub-Clause 1.1.5.5 which reads:

> "**Plant**" means the apparatus, machinery and vehicles intended to form or forming part of the Permanent Works

Sub-Clause 1.1.5.7 which reads:

> "**Temporary Works**" means all Temporary Works of every kind (other than Contractor's Equipment) required on Site for the execution and completion of the Permanent Works and the remedying of any defects.

And

Sub-Clause 1.1.5.4 which reads:

> "**Permanent Works**" means the permanent works to be executed by the Contractor under the Contract.

It can be seen that the term "Goods" is therefore a very wide one, including not only materials but also the construction equipment required to carry out a Variation and any machinery which might need to be installed as part of the Variation. It also includes such materials and equipment as may be necessary for any Temporary Works associated with the Variation. If all such Goods are not readily available the Contractor is entitled to refuse to carry out the Variation. To give such refusal he must serve a detailed notice, but, having done that he is not required to continue unless the Engineer alters the instruction so that the Goods, not readily available, are no longer necessary.

The question is therefore what is meant by the expression "cannot readily obtain the Goods required for the variation." It is clearly only intended to apply to the situation where the Contractor does not already have the materials and equipment necessary and must obtain them. The word "readily" is therefore key. The Oxford dictionary definition of "readily" is

> "without delay, without difficulty".

Thus the effect is that if any goods, materials or equipment required to be obtained by the Contractor to carry out the variation are not available immediately and without difficulty, the Contractor is entitled to give notice that it does not wish to execute or be bound by the Variation.

The consequence of such a notice is not entirely clear. The Engineer, having received the notice may cancel, confirm or vary the instruction. If the Engineer chooses to cancel there is clearly no problem. If he chooses to vary and the Contractor still finds he cannot readily obtain the Goods, there seems to be no reason why the Contractor cannot again give notice. However if the Engineer chooses to confirm the instruction, this effectively means that he is rejecting the Contractor's assertions and it would seem that in those circumstances the Contractor is bound to continue and carry out the Variation instruction. In those circumstances the Contractor will certainly have put the Engineer on notice that the variation is likely to be costly and/or cause significant delay. Thus if a Contractor has given notice that it cannot readily obtain the Goods and the Engineer has confirmed the instruction, the Contractor should immediately give notice under Clause 20.1 (repeating what it has said in its notice under the present Sub-Clause and adding any additional

relevant information) so as to set the basis for a claim for additional payment and an extension of time.

It is clear from the above that Variations by instruction are fraught with problems – from the Employer's point of view they open up the risk of additional expense outside the original contract scope and of delay which cannot be readily quantified in advance. From the Contractor's point of view they are treated as an ordinary basis of claim and the Contractor therefore runs the risk of falling foul of the time bar under Sub-Clause 20.1. Variations are much better dealt with by way of agreement and a procedure which will hopefully lead to a variation agreement is set out in Sub-Clause 13.3 [*Variation Procedure*]. However where the parties cannot reach agreement the procedure of variation by instruction is essential to the successful completion of all construction projects.

When the Contractor gives notice under Sub-Clause 20.1, it must do so within 28 days of the "the event or circumstance" giving rise to the claim. In *Obrascon Huarte Lain SA v Her Majesty's Attorney General for Gibraltar*[2] Akenhead J considered when the "event or circumstance" described in the first paragraph of Sub-Clause 20.1 would arise. His lordship concluded that there were two dates and stated it "can mean either the incident (variation, exceptional weather or one of the other specified grounds for extension) or the delay which results or will inevitably result from the incident in question." Akenhead J used the following example. If an instruction for a Variation was issued on 1 June but the delay caused by the instruction did not occur until November then the Contractor had to 28 days from the date of the delay (i.e. November) to give its Sub-Clause 20.1 notice.

Summary – Variation by Instruction

Because of the interaction of Sub-Clause 3.3 [*Instructions of the Engineer*] and Sub-Clause 13.1 [*Right to Vary*] it is clear that a Variation need not follow a particular format and that whether or not it is a Variation will depend, not so much on how it is described, as on what it requires the Contractor to do. The scope and limitations of Variation orders is discussed in more detail below.

If the Variation is given by instruction, the Contractor will have to give notice under Sub-Clause 20.1 [*Contractor's Claims*] to be granted any appropriate extension of time. It is preferable for the Engineer/Employer and Contractor to agree on the cost and time implications of a Variation, rather than for the Engineer to rely on his power to issue a Variation instruction.

[2] [2014] EWHC 1028 at para 312

A Contractor may not be obliged to carry out a Variation instruction if he can show that he cannot easily and quickly obtain the necessary goods, materials and equipment to enable him to do so.

Scope of Variation

Sub-Clause 13.1 includes a list of items which may constitute a Variation but it does not attempt an all inclusive definition. It is thus possible that instructions other than those included within the list in the Sub-Clause might be considered to constitute a Variation.

However, as will be seen below, none of the items in Sub-Clause 13.1 contemplate any substantial departure from the original scope of the Works. Paragraph (a) allows changes of quantities, but does not contemplate new items. Paragraph (b) contemplates changes to quality and characteristics of items but, again not new items. Paragraph (c) simply deals with topographical changes to the originally contemplated works. Paragraph (d) is only about omission of work. Although Paragraph (e) refers to additional work this additional work is limited to that necessary for the originally contemplated Work and Paragraph (f) again only refers to a change to the sequence or timing of what was originally intended.

It is therefore arguable in the absence of any other clarification of what is intended by the word "Variation" in this Contract that the concept of Variation is not intended to allow the Employer to expand the scope of the Works as originally intended in any significant way.

This is not an issue which will normally be contentious – Contractors normally welcome the opportunity to be paid for doing more work – but there are times when additional work is not welcome. It may be outside the normal capability of the particular Contractor. The Contractor may have committed his resources to new and more profitable work with a different employer once the current project is complete. The rates and prices on the basis of which the varied work will be valued under Sub-Clause 12.3 *[Evaluation]* may be unprofitable for the Contractor. It would therefore be incorrect for an Employer to assume that it can simply instruct the Contractor to carry out any work where the Contractor objects and the work is clearly outside the original scope of the works.

Under English Law there is probably an implied term, based on the concept of business efficacy, that instructions should be reasonable and not stray 'outside the Contract'[3]. In

[3] The International Civil Engineering Contract, I.N. Duncan Wallace QC, Sweet and Maxwell, London 1974, p 97; *Thorn v London Corporation (1876) 1 AC 120.* At p 127, of the judgment it is suggested that the Contractor faced with a demand for a variation which is "so peculiar, so unexpected, so different from what any person reckoned or calculated upon that it is not in the contract at all …" may either refuse to the do the Work, or demand a new price based on the true value of the Work. See also *Blue Circle Industries*

Thorn v London Corporation[4] it was suggested that where the scope of the variation could not have been foreseen in the contract then the Contractor could either refuse to undertake the work or claim a quantum meruit for payment of this work. In the United States this is referred to as the principle of "cardinal change". In *Luria Brothers & Company Inc v United States*[5] the court held that the ground conditions for the work had so changed that the Contractor was able to establish that a cardinal change had occurred.[6] However, what one needs to do "is to look at the variation clause in question and determine, depending on what the variation clause covers, whether the extra or altered work falls within it or not."[7] In *ICS (Grenada) Limited v NH international (Caribbean) Limited*[8] the High Court of Trinidad and Tobago held that an implied agreement to accelerate the works would not amount to a variation but would be a separate contract.

Dealing with each of the items listed in Sub-Clause 13.1

(a) Changes to the quantities of any item of work included in the Contract (however such changes do not necessarily constitute a Variation)

In a remeasurement contract it is expected that there will be changes in quantities as the amounts included in the Bills are always estimates. Thus such changes are not variations.[9] The changes referred to here can only be those which result from an instruction. If they are the result of an instruction which is in fact a change to the scope of the Works they will be a variation.[10] The words in brackets are apparently only there to re-iterate the normal position that changes in quantities, not the result of a Variation instruction, are not a variation.

It should be noted that this provision as drafted is wide enough to allow for an omission of quantities and that, in contrast to sub paragraph (d) below there is nothing to prevent the Employer omitting a quantity in order to have it carried out by others. It is suggested that in order to achieve the clear intention set out in Sub-paragraph (d) below, Sub-

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plc v Holland Dredging Co Ltd (1987) 37 BLR 40 in which it was said that the varied works must have some relationship to the current contract works.

[4] (1876) 1 AC 120

[5] (1966) 369 F 2d 701

[6] See further Sergeant & Wieliczko, *Construction Contract Variations* (2014) Informa Law at paras 5.29-5.35

[7] *Supablast (Nationwide) Ltd. v Story Rail Ltd.* [2010] EWHC 56 (TCC) at para 31

[8] [2004] TTHC 6

[9] *Grinaker Construction (Transvaal) (Proprietary) Ltd v Transvaal Provincial Administration* (1982) 20 BLR 30 and *National Highways Authority of India v M/S ITD Cementation India Ltd (formerly M/S Skansk* - OMP 23/2007 [2009] INDLHC 3050. However, see *National Highways Authority of India v Som Datt Builders & ORS* FAO(OS)No.427 of 2007 where the High Court agreed that new rates should be used where there was a serious error within the Bill of Quantities.

[10] *English Industrial Estates Corporation v Kier Construction Ltd* (1992) 56 BLR 93 and *Crosby v Portland UDC* (1977) 5 BLR 121.

Paragraph (a) should also be read subject to the limitation that there cannot be an omission of a quantity of an item in order to have it carried out by others.[11]

(b) Changes to the quality and other characteristics of any item of work.

This item refers to changes to items which are already included in the Specification and Bills.

(c) Changes to the levels, positions, and/or dimensions of any part of the Works

This item does not envisage any change to the general scope as such, only the location and size of the Works – although these changes may make a significant difference.

(d) Omission of any work unless it is to be carried out by others

This provision is clearly intended to prevent Employers omitting work so as to get it done more cheaply or better by others. It is thus intended to protect the Contractor's position. However it should be noted that under Sub-Paragraph (a) the Engineer can omit quantities without limitation. It is suggested that Sub-Paragraph (a) should also be read as being subject to the limitation that an omission of quantities cannot be instructed if the intention is to have the same work carried out by others.[12]

This limitation may turn out to be very burdensome for some Employers. If, for some reason, a project has over-run its budget the Employer may wish to omit part of the Works and only return when it has the money to do so. Sub-Paragraph (d) would prevent this strategy. However if the Employer has realised during the course of the Works that the design or the working conditions have to be changed, or has decided that it no longer needs the works this provision may be used.

The omission of works by an Employer who intended to have the works carried out by other contractors was considered in the case of *Abbey Developments v PP Brickwork*.[13] In this case the court stated that provisions allowing for omissions had to be construed carefully:

> *"so as not to deprive the contractor of its contractual right to the opportunity to complete the works and realise such profit as may then be made.... The basic bargain struck between the employer and the contractor has to be honoured, and an employer who finds that it has entered into what he might regard as a bad bargain is not allowed to escape from it by the use of the omissions clause so as to enable it then to try and get a better*

[11] See the "purpose test" as set out in *Abbey Developments v PP Brickwork* [2003] CILL 2033, TCC
[12] See *Partial Award in Case 13258*, ICC International Court of Arbitration Bulletin Vol 23, No 2 page 88
[13] [2003] CILL 2033, TCC

> *bargain by having the work done by somebody else at a lower cost once the contractor is out of the way..."*

Judge Lloyd QC in *Abbey Developments* then posed the following question: "What purpose did the contract envisage?" His Lordship stated:

> *"In my judgement,... the purpose of a variations clause is to enable the employer to alter the scope of the works to meet its requirements. As a project proceeds it may become clear that some change of mind is needed to attain the result now desired. That might be... for some other reasons such as lack of money. The test must therefore be whether the variations clause is or is not wide enough to permit the change that was made. If, with the advantage of hindsight, it turns out that the variation was not ordered for a purpose for which the power to vary was intended then there will be a breach of contract."*

The above principles were subsequently approved by Jackson J in *Trustees of the Stratfield Saye Estate v AHL Construction Ltd*[14] and again in *Multiplex Constructions (UK) Ltd v Cleveland Bridge UK Ltd & Anor.*[15]

There is similar authority in Australia which restricts the right of the Employer to omit works so as to give it to another contractor: *Carr v J.A. Berriman*.[16] In *Commissioner for Main Roads v Reed & Stuart,*[17] the High Court of Australia followed the court's reasoning in *Carr v J.A. Berriman* stated that the variation clause:

> "permits the omission from time to time by the proprietor of portion of the contract works. What it clearly enough does not permit is the taking away of portion of the contract work from the contractor so that the proprietor may have it performed by some other contractor."

The principle that an omissions clause does not permit an Employer to omit work simply to give it to another contractor is also applicable in the United States. In *Gallagher v Hirsh,*[18] the court interpreted the word "omissions" contained in a variations clause and concluded that:

> *"It is evident that under the word 'omissions' were intended to be included these things which were abandoned and left out of the plaintiff's contract and not such as were taken out of the plaintiff's contract and given to another to perform. The word 'omission' did not mean omitted from the plaintiff's contract, but omitted*

[14] [2004] EWHC 3286
[15] [2008] EWHC 2220
[16] [1953] 89 CLR 327
[17] [1980] 12 Lloyd's Rep. 55
[18] 45 N.Y. App. Div. 467 (1899)

from the work; and clearly could not be construed to have allowed the defendant to take two-thirds of the work from the plaintiff and then compel him to perform the rest."

(e) Any additional work, Plant, Materials or services necessary for the Permanent Works, including any associated Tests on Completion, boreholes, testing and exploratory work.

This provision is limited to additional work etc "necessary for the Permanent Works" – i.e. for what was originally contemplated under the Contract. In other words, although this item refers to "additional work" it does not mean anything which changes the original concept of the Permanent Works.

(f) Changes to the sequence or timing of the execution of the Works

Like the earlier items listed above this item does not contemplate anything substantially different to the originally contemplated Works. The sequence or timing of the Works is normally under the control of the Contractor. The sequence and timing of the execution of the Works will have been set out in the Programme provided by the Contractor under Sub-Clause 8.3 [*Programme*] and the Contractor is required under Sub-Clause 8.3 to proceed in accordance with the Programme it submits. Thus it appears that the purpose of this provision is simply to allow the Engineer to require the Contractor to alter the elements of its programme which relate to sequence and timing. "Timing" in Sub-Clause 8.3 does not refer to the speed at which the Contractor carries out his work but to the dates on which various events are to take place. However a change to timing could in some circumstances mean that the Works have to be carried out more quickly. Thus a Variation instruction under (f) could have the effect of requiring the Contractor to accelerate or slow down and of course to complete parts of the work at times it had not originally intended. However paragraph (f) does not state that the Engineer can use his power of instructing a Variation to change the Time for Completion – only the sequence and timing of the Works in the interim. It can thus be said that the Engineer does not have the power to order the Contractor to accelerate as a Variation, though the effect of ordering a change to sequence or timing may have much the same effect.

Any instruction under (f) will inevitably lead to a need to change the programme and, following such an instruction the Engineer should also issue an instruction under the last paragraph of Sub-Clause 8.3 requiring the Contractor to submit a revised programme.

Sub-Clause 13.2 – Value Engineering

The Contractor has the right to submit proposals for variations which may accelerate completion, reduce the cost either of completing the Works or of their ultimate maintenance or operation, improve the efficiency or the value of the Works or otherwise benefit the Employer.

The proposal is provided at the Contractor's cost and must include a description of the proposed changes and a programme, details of any modifications necessary to the pre-existing programme and the Time for Completion and the proposed payment.

If the proposal requires a design change, then, unless otherwise agreed, the new design will have to be prepared by the Contractor.

If the change reduces the contract value, the engineer will determine a fee to be payable by the Employer to the Contractor. The fee will be 50% of the benefit which the Employer derives from the variation.

The intention of this provision is to encourage Contractors to apply their knowledge and experience to the benefit of both themselves and the Employer. A Contractor may benefit in two ways from a variation it proposes. It may benefit because its costs of production are reduced but the Employer receives a product which is as good as that originally designed. Alternatively it may find a way in which it increases the value of the final product to the Employer without incurring additional costs.

If the Employer accepts a proposal which reduces the Contractor's cost of production without impacting on the quality of the product received by the Employer, no adjustment is to be made to the contract sum.

Similarly, if the proposal results in increased value to the Employer, and either reducing or without increasing the Contractor's cost of production, there is no adjustment to be made.

It is only where the reduced production cost is also matched by a reduction in final value or no change to the final value to the Employer that an adjustment has to be made. In that case the Engineer is required to make a determination under Sub-Clause 3.5 of the reduction in value to the Employer. If the reduction in value is less than the reduction in cost to the Employer, the benefit is split 50/50. Strangely the formula does not take account of the possible situation where there is a reduction in cost but an increase in value – one of the main purposes of value engineering.

The provision is thus a rather limited one. It does not provide for any incentives for schemes which increase the value to the Employer, only for those which reduce the value to the Employer by less than the reduction in the cost to the Employer. Clearly an employer is likely to be pleased if its contractor develops an idea which increases the

value of the Works, without increasing the cost. Many Employers will be happy even if there is a lower increase in cost than the increased value. However the Sub-Clause does not provide for any fee to be paid in these cases and thus there is no built-in incentive for Contractors to take the risk of making such a proposal.

It is also unlikely that, even in return for a reduced cost, Employers will be interested in a proposal which will reduce the value of the works.

Thus the only situation in which the Employer has a real incentive to accept such a proposal and pay a fee is where the Contractor proposes a method by which costs can be reduced without any reduction in value of the final product.

Should a Contractor believe that it can produce a proposal which increases the value of the works at no cost or at a cost significantly less than the increase in value, it would need to persuade the Engineer and the Employer in advance to agree to a sharing of any benefits it can demonstrate. Similarly if the proposal would produce an intangible benefit – such as early completion – there is no clear mechanism built into the contract and this would have to be agreed before the Contractor made the effort to produce a proposal.

If the Contractor has a proposal which would reduce its costs without reducing the value to the Employer, the Employer has no incentive on the strict wording of the Sub-Clause to accept it. However, the Contractor may be able to persuade the Employer to consider such a proposal if it is prepared to share the benefits with the Employer.

To assess the fee due to the Contractor under the Sub-Clause, the Engineer has to establish any reduction of the contract value and the value to the Employer, taking into account any reductions in quality, anticipated life or operational efficiencies. The assessment of the reduction in the contract value may be more difficult than appears at first sight. The Contract will originally have been entered using an Employer's design, but the Contractor's proposal will be based on the Contractor's own design. The Engineer may have difficulty establishing a new value as it may not be possible to apply bill rates in order to reach a new value. Similarly the assessment of the final value to the Employer is a difficult task, because it requires the Engineer to look into the future – what changes will there be to quality? How will the life expectancy be effected and so on? The supervising Engineer will have had no design responsibility up to this stage and may not even be qualified to make such assessments. This is clearly a complex task and, from the point of view of the Contractor, not easily predictable and often arguable. Further as will be seen in the discussion below of Sub-Clause 13.3 [*Variation Procedure*], the Contractor, having made his proposal may be forced to implement it even if he is not happy with the Engineer's determination of a fee.

Sub-Clause 13.3 Variation Procedure

This Sub-Clause supplements Sub-Clauses 13.1 and 13.2 to deal with those Variations where the Engineer has not instructed a variation.

Where the Engineer has requested the proposal the Contractor is entitled to reply by advising why he cannot comply with this request (if this is the case) or by submitting

- a proposal setting out the work proposed and a programme,
- any necessary modifications to the programme,
- his price proposal

The Engineer is required to respond as soon as practicable with approval, disapproval or comments.

The Contractor is not permitted to delay any work (i.e. work other than that included in the variation proposal request) while awaiting a response.

The Engineer then may issue the Contractor an instruction to execute the Variation. Such instructions may include requirements for the Contractor to record his Cost. The Contractor is required to acknowledge receipt.

The rules set out in Clause 12 [*Measurement and Evaluation*] will be applied for the evaluation of the Variation unless the Engineer has instructed or agreed another price.

The Contract does not indicate any preference as between Variations by instruction or by proposal, followed by agreement or instruction. From a project management point of view the latter course is obviously preferable as it allows the project to proceed without uncertainty as to the cost or need for extension of time.

The Engineer is required to make a request in order to set this procedure in motion. A request is not the same thing as an instruction. The FIDIC Guide states that while a Contractor is obliged to comply with an instruction (Sub-Clause 3.3 [*Instructions of the Engineer*]) it is not obliged to comply with a request. Indeed the Guide recommends that the Engineer make it very clear that he is merely making a request. The Engineer should specifically use the word "request" when he makes his written approach to the Contractor. The Guide suggests that if the word "instruction" is used, or if there is any ambiguity, the Contractor may be able to argue that the instruction is itself a variation, for which the Contractor would be entitled to be paid.

If a request is not binding the Contractor would, in the absence of any other wording in the Sub-Clause be entitled not to respond. The Sub-Clause, however, places a positive obligation on the Contractor to respond either by giving reasons why he cannot comply with the request, or by making his proposal. Thus it would appear that while the

Contractor is not contractually obliged to respond to the request, it is obliged to explain why it cannot respond. Unless the Contractor is entitled to say he cannot respond because he does not wish to, the final result seems to be that, contrary to the guidance given in the Guide, the Contractor is not entitled to ignore the request and must at the very least give a good explanation as to why he does not intend to respond.

The Sub-Clause does not spell out what might be good reasons for the Contractor to refuse to reply. The reason for not complying with a variation given in Sub-Clause 13.1 (cannot readily obtain the Goods), would be one justifiable reason not to respond to the request – there is not much point in responding to a request if, once the Contractor gave a proposal he was entitled to refuse the consequential variation instruction. However what is in issue here is the Contractor's ability to respond to the request, not to carry out a Variation which might eventually follow. Thus it would be a good reason not to comply with a request if it were too vague. Arguably, also the Contractor would be entitled to refuse if he did not have the staff resources to respond. The response is broken into three elements and the Contractor would also be within his rights to respond to part of the request but not to other parts – again providing reasons why he cannot respond to the other parts.

In some circumstances the Contractor may be in breach of Contract by not responding, by giving inadequate reasons for not responding, or (not having given reasons why he cannot respond) by submitting a response which does not cover all the elements that the Sub-Clause require. However in view of the Guidance stating that the Contractor is not obliged to respond to a request, an Engineer should be very careful before taking the only remedial action open to him – the issuance of a Notice to Correct under Sub-Clause 15.1

The Engineer, faced with a refusal to respond or an inadequate response still has the option to go ahead with a Variation by instruction under Sub-Clause 13.1, and it is suggested that this is the wisest approach for him to take in the absence of co-operation by the Contractor.

The Contract does not indicate whether the Contractor should be paid for his work in preparing a proposal – the costs can be substantial. The FIDIC Guide explains (not very helpfully):

> *"Since the Contractor's obligation to comply with a request is limited to such an explanation [i.e. why he cannot respond] and/or to the listed documents, he is not stated as having any entitlement to payment. He may be unwilling to incur much Cost, such as by undertaking detailed design, for the purpose of complying with the request. Typically, those preparing an offer are not paid for doing so, but payment may be appropriate if detailed design is involved."*

The information which the Contractor is required to provide includes a description of the proposed varied work and a programme. This requirement for a programme relates only to the variation itself and is not cross-referenced to Sub-Clause 8.3 [*Programme*] and it is thus unclear whether the Contractor is obliged to provide a method statement and details of resources. Clearly such information is important to enable the Engineer to evaluate the proposal, so the Contractor would be unwise not to include such information. However if the Contractor is not enthusiastic about the prospect of carrying out the variation, this lack of clarity in the wording may provide him with an opportunity to disrupt the process by giving the Engineer less information than he needs. However the Contractor is also required to provide modifications to the Sub-Clause 8.3 Programme (i.e. the programme for the whole of the Works) and this may to some extent ensure that the necessary methodology and resource information is provided.

The Contractor is also required to submit its proposal for the evaluation of the Variation. This goes further than simply a proposed price for the Variation. Evaluation is a process (see Sub-Clause 12.3 [*Evaluation*]) and the Contractor should provide the Engineer not only with its final price but with its proposal as to how the Engineer should reach this figure based on the Sub-Clause 12.3 methodology.

The Sub-Clause provides that the Engineer should respond as soon as practicable. Although this does not set a time limit, it clearly requires prompt action. The amount of time may depend on the amount of documentation, the complexity of the proposal and the extent to which the Employer needs to be consulted. The obligation to respond as soon as practicable may be important for the Contractor because the methodology, resourcing and evaluation may change with time. The Contractor would be wise to place a time limit for the validity of its information, although this may not prevent the Engineer taking too long to evaluate the proposal.

The Engineer's response may be approval, disapproval or comments. If the Engineer does not approve and either issues a disapproval or makes comments which do not lead to agreement on a proposal, there is no reason why the Engineer should not proceed with a Variation on terms he considers appropriate by issuing a variation.

The Contractor is obliged not to delay any work whilst awaiting a response. This refers to work other than that included in the requested or proposed Variation. However if the request or proposal is expected to require changes to work which is already under way and a Variation is probable, it will almost certainly be to the Employer's advantage to delay carrying out work which would otherwise later have to be removed or altered. The Contractor is entitled (in fact required) to proceed with this work. Thus, if the Variation is later instructed, the Contractor will be entitled to be paid for the expense of removing any unnecessary work and given an appropriate extension of time for any delay caused by the removal. It follows that the contractual obligation placed on the Contractor not to delay other work while waiting for a variation instruction effectively places an obligation

on the Engineer (a) to act quickly and (b) if necessary to take steps to mitigate losses to the Employer by suspending work under Sub-Clause 8.8 [*Suspension of Work*].

Sub-Clause 13.4 Payment in Applicable Currencies

Where the Contract provides for payment in more than one currency the amounts payable in each currency for any variation shall be set out in the variation. The way in which the payment is apportioned shall be by reference to the actual or expected currency proportions of the Cost of the varied work and the proportions of various currencies specified for payment of the Contract Price.

This Sub-Clause sets out two tests for determining the proportions of currency for payment for Variations. The first is by reference to actual Cost and the second is by reference to the proportions in the Contract Price. These two methods may not be consistent. The discretion as to how to resolve any inconsistency is left entirely to the Engineer.

Since this Sub-Clause does not cross refer to Sub-Clause 3.5 [*Determinations*] there is no obligation on the Engineer to consult with the parties or to make a fair determination. Thus if the Contractor is dissatisfied he will be obliged to make a claim within 28 days under Sub-Clause 20.1 [*Contractor's Claims*]. This would be on the basis that the choice of currencies reduces the effective amount due to him and he is entitled to an additional payment. Sub-Clause 2.5 [*Employer's Claims*] would not seem to apply to Employers' equivalent issues as it only applies where the Employer considers himself entitled to a payment. The Employer's only recourse will therefore be direct to the DAB under Sub-Clause 20.4 [*Obtaining Dispute Adjudication Board's Decision*].

Sub-Clause 13.5 Provisional Sums

Provisional sums are only to be used when, and to the extent, instructed. Depending on the particular purpose of the Provisional Sum, the Engineer may either instruct the work to be executed by the Contractor and valued under Sub-Clause 13.3 [Variation Procedure]; and/or instruct the Contractor to purchase the relevant Plant, Materials or services from a nominated Sub-contractor and then include in the Contract Price the actual amounts paid (or due) and overhead charges and profit. Overhead and profit should either have been agreed in the Contract for the particular item or should have been included in the Appendix to Tender. The Contractor is required to produce proof of his costs if asked.

The term "Provisional Sum" is defined in Sub-Clause 1.1.4.10 by cross-reference to Sub-Clause 13.5. This definition does not add anything to the meaning of the present Sub-Clause.

A Provisional Sum will be included in the Contract because, at the time the Contract is awarded, the Employer has not yet decided whether or not to instruct the Contractor to carry out the work which it covers. This may be because the relevant work is not already designed or because the Employer is not sure whether he wants, needs, or can afford it. It will be entirely at the discretion of the Engineer or Employer whether the work is instructed, but the Contractor will be obliged to carry out the work, if so instructed.

An instruction to carry out work covered by a Provisional Sum is therefore not equivalent to a Variation, though it may have a similar effect on the Contractor's progress and will obviously lead to additional payment. In the English case of *Midland Expressway Ltd v. Carillion Construction Ltd*[19], the Court of Appeal provided a definition of what a "provisional sum" was:

> *"The term "provisional sum" is generally well understood in the construction industry. It is used in pricing construction contracts to refer either to work which is truly provisional, in the sense that it may or may not be carried out at all, or to work whose content is undefined, so that the parties decide not to try to price it accurately when they enter into their contract. A provisional sum is usually included as a round figure guess. It is included mathematically in the original contract price but the parties do not expect the initial round figure to be paid without adjustment. The contract usually provides expressly how it is to be dealt with. A common clause in substance provides for the provisional sum to be omitted and an appropriate valuation of the work actually carried out to be substituted for it. In this general sense, the term "provisional sum" is close to a term of art but its precise meaning and effect depends on the terms of the individual contract…..*

Provisional Sums and Programming

As stated in *Midland Expressway v Carillion* a provisional sum *may "refer either to work which is truly provisional, in the sense that it may or may not be carried out at all, or to work whose content is undefined, so that the parties decide not to try to price it accurately when they enter into their contract."* A question therefore arises - if a Contractor does not include any time within his programme for Provisional Sum works then will he be entitled to an extension of time when the Engineer instructs the expenditure of the Provisional Sum? The issue was briefly considered in FIDIC 4th A Practical Legal Guide.[20] The conclusion reached was that the wording was uncertain and that there was considerable doubt whether a claim for an extension of time would succeed. It was stated that the expenditure of a Provisional Sum does not fall comfortably within any of the

[19] [2006] EWCA Civ 936
[20] EC Corbett, *FIDIC 4th A Practical Legal Guide,* (1991) Sweet and Maxwell London at pp. 350 - 351

categories of variation listed and, as stated by EC Corbett, "it was not the intention of the draftsmen that provisional sum work should fall within 'varied work'."

Other commentators concur that because there is no provision in Sub-Clause 8.4 of FIDIC 1999 (extensions of time), which expressly deals with Provisional Sums, the presumption must be that the Contractor takes the programming risk.[21] This conclusion is supported by the wording of Sub-Clause 4.11, which states: "*Unless otherwise stated in the Contract, the Accepted Contract Amount covers all the Contractor's obligations under the Contract (including those under Provisional Sums, if any) and all things necessary for the proper execution and completion of the Works and the remedying of any defects."* (*our emphasis*). "All the Contractor's obligations" includes the obligation to complete by the Time for Completion.

However, this is not to say that when a Provisional Sum is exceeded the Contractor is without a remedy. A Contractor cannot programme for works which are not foreseen. If the scope of the work increases so that a Provisional Sum of say £5 million becomes £12 million then this should entitle the Contractor to an extension of time under Sub-Clause 8.4(a). In the case of *Forest Heath DC v ISG Jackson Ltd*[22] an adjudicator considered that such an increase in the quantities of a provisional sum item may entitle the Contractor to an extension of time if delay could be proven.[23] Ramsey J in the TCC did not disagree with this conclusion. The Red Book Guide endorses this view. It states:

> *Provisional Sums are defined as any sums specified in the Contract as provisional sums, so the Engineer or Employer cannot add new Provisional Sums (by Variation or otherwise). Also, Sub-Clause 13.5 refers to each Provisional Sum being used "in whole or in part", but not in excess, so the Engineer or Employer cannot increase the amount of a Provisional Sum (by Variation or otherwise).*
>
> *Under [the Red Book], if the amount stated in a Provisional Sum is exceeded, the Contractor must still comply with the Engineer's instructions which he received under sub-paragraph (a) and/or (b), but he may not be bound by the financial consequences under this Sub-Clause in respect of the excess.*

Furthermore if the expenditure of the Provisional Sum arises because of an event that gives rise to an entitlement to an extension of time under the Contract then there should be no good reason why the Contractor would not be awarded an extension of time. For example, the Provisional Sum may be included to deal with expenditure on ground conditions or utilities. In such circumstances, if a delay is caused because of unforeseeable physical conditions or delays by the utility provider then there is no reason why the Contractor should not claim an extension of time.

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[21] *James Doe*, Who Holds the Programming Risk, Construction Law , January 2008, page 7
[22] [2010] EWHC 322 (TCC)
[23] Although this case did not deal with a FIDIC form of contract the principle should equally apply.

A Contractor should give notice if it considers the works will be delayed in the absence of an instruction from the Engineer relating to the provisional sum. The Contractor should advise the Engineer when it needs the instruction and such other information as prescribed buy Sub-Clause 1.9. In this way the Contractor can then claim an extension of time in the event that the instruction of the Provisional Sum is made after this date.

Provisional Sums - Defined or Undefined

The FIDIC forms of contract do not make any distinction between defined and undefined work. This is a concept which is used in other forms of contract and at General Rule 10.4 of the Standard Method of Measurement, 7th Edition (SMM7). If SMM7 is incorporated into the FIDIC Red Book contract then the following would apply: *'where Provisional sums are given for defined work the Contractor will be deemed to have made due allowance in programming, planning and pricing preliminaries'*.

General Rule 10.6 of SMM 7 states that the Contractor is deemed to have made no such allowance for undefined work. It is therefore important to understand the categorisation of 'defined' and 'undefined' Provisional Sums. A Defined Provisional Sum is a sum of money intended for elements of the Works which have not been sufficiently designed but where there is certain defined information available. In order to be 'defined' provisional sum the following information has to be included in the Bill of Quantities:

(a) The nature and construction of the work.

(b) How and where the work is to be fixed.

(c) Quantities showing the scope and extent of the work.

(d) Limitations and the like identified in Section A35 of SMM 7 on the method of construction, sequence and timing

If this information is not included, the Bills of Quantity should describe the provisional sum as 'undefined'. When instructions have been issued regarding the expenditure for undefined Provisional Sums then the Contractor will be entitled to an extension of time if the work instructed has delayed completion of the Works.

Although an instruction to use a Provisional Sum is not treated as being similar to a Variation for extension of time purposes, for valuation purposes a Provisional Sum is treated in the same way as a Variation under Sub-Clause 13.3 [*Variation Procedure*]. Sub-Clause 13.3 simply says that the evaluation is to be carried out in accordance with Clause 12 [*Measurement and Evaluation*]. Thus if the Provisional Sum is explicit about

the rate or price to paid for the work, this is the rate to be applied, but otherwise one of the other methods set out in Sub-Clause 12.3 [*Evaluation*] will have to be applied. It is therefore good practice to ensure that the price for Provisional Sum includes details of the amount to be paid for any discrete elements within it. As will be seen from the following paragraph, this means that in some circumstances a Provisional Sum does not in fact place a cap on what is to be paid for the works when they are instructed.

If the Provisional Sum is not fully costed in advance and particularly if it is to be used to pay suppliers or subcontractors nominated by the Employer, it is clearly possible that the amount set aside will be exceeded. There is a question then as to whether the Employer or the Contractor takes this risk. As with the programme effects of Provisional Sums, a lot will depend on the nature of the intended use of the Provisional Sum. If the work required is very clearly set out in the description of the Provisional Sum and does not change, the pricing mechanism under Sub-Clause 12.3 [*Evaluation*] should produce the result that the Contractor will not be entitled to additional payment. However if there is only a rather vague description set against the Provisional Sum in the original Bill item, the Sub-Clause 12.3 process will require the Engineer to determine a price based on actual cost or on the basis of analogous items in the Bill of Quantities and there is no reason why this should not turn out to be higher than that originally included. As with the programming implications of Provisional Sums, this means that, when using Provisional Sums, the price implications need to be carefully thought through in advance.

Provisional Sums and Omissions

A question arises as to whether a Provisional Sum can be said to form part of the Works so that in the event that the Employer terminates the contract for convenience he could then carry out the works which were the subject of the Provisional Sum himself. On one view, as the Provisional Sum can only be expended on the Instruction of the Engineer, it cannot, until that time, be said to form part of the Works. The contrary view is that "if the provisional sum is inserted in the contract for special works, it would seem that the works cannot be omitted and given to another contractor without rendering the employer liable for damages for loss of profit."[24] There appears to be no clear answer to this question.

Sub-Clause 13.6 Daywork

This Sub-Clause only applies if a Daywork Schedule is included in the Contract and to minor incidental work. In that case a Variation can be instructed on the basis that is paid for in accordance with the Schedule. Goods may not be ordered until the Contractor submits quotations to the Engineer. The Contractor must submit proof of payment before being paid. The Contractor is required to deliver a daily breakdown in duplicate listing

[24] Som Mandal and Pooja Dood, *FIDIC An Analysis of International Construction Contracts*, Kluwer Law International

all items for which payment is due and including details of the personnel used, equipment and temporary Works used and the quantities used. The Engineer signs off on one copy. The Contractor then prices the resources and includes the cost in his next Interim Payment Certificate.

Unlike the previous Sub-Clause, this is a true Variation provision. Its main effect is to provide for an alternative method of valuation, instead of that in Sub-Clause 12.3 [*Evaluation*]. It does not provide for a method of payment except where such a variation is ordered.

The FIDIC Guide suggests that the Daywork Schedule should contain the following:

> (a) a time charge rate for each person or category (money per person per hour, for example),
>
> (b) a time charge rate for each category of Contractor's Equipment (money per hour per item, for example), and
>
> (c) the payment due for each category of Materials. This is usually on a basis similar to that described in Sub-Clause 13.5(b). However, for some Materials (for example, natural Materials and Materials manufactured on Site), it may be appropriate to provide items for pricing on a money per unit quantity basis.

The Sub-Clause specifically contemplates that some dayworks items may not be the subject of separate payment (presumably their cost is incorporated into one of the other rates). Thus it is important that, if this is intended, the Dayworks Schedule list those items for which no payment is to be made.

However, although the Sub-Clause does not come into effect unless a Daywork Schedule has been included in the Contract, there is nothing in it to say that work not listed should not be paid for. The Sub-Clause does not spell out how such work is to be valued. It is suggested that if there are items of work necessary for the carrying out of the Dayworks Variation which are not priced in the Dayworks Schedule, they should be valued in accordance with the general principles set out in Sub-Clause 12.3 [*Evaluation*] as they would be if this were any other variation.

13.7 Adjustments for Changes in Legislation

The Contract Price is to be adjusted for increases or decreases in Cost resulting from changes to the law in the country where the works are being carried out. Changes to law include not only new laws or modifications to old laws but changes of interpretation. Adjustments will be made where the changes have taken place after the Base Date and where they affect the Contractor in the performance of the Contract.

Where the Contractor is affected by a change in Law he is required to give notice to the Engineer and may be entitled to an extension of time and/or Cost. The Engineer determines the compensation either case in accordance with Sub-Clause 3.5 [Determinations].

In two respects, this provision is more limited than appears at first glance.

a. Although the Contractor may be entitled to both an extension of time and to Cost, he will only be entitled to the extension of time if he can show that his Costs have increased.

b. The provision is limited to changes of law in the Country where the Works are being carried out. In an international project, the Contractor is as likely to be affected in another country as in the country where the Works are actually being taken place – much of the manufacture may be taking place off shore and materials and labour may well be being procured elsewhere. There is thus an arbitrary distinction between changes in the Country of the Works and changes in other countries.

However in another respect, depending on the legislative system in the Country of the works, the provision may be wider than it appears at first glance. In many countries prices and wages are to some extent determined by law or decree, so some increases in Cost may as a result be recoverable.

In these circumstances there may be a risk of double counting as a result of the provisions of Sub-Clause 13.8 [*Adjustments for Changes in Cost*]. Sub-Clause 13.8 may, for example provide for an adjustment to take into account an increase in wages or fuel – yet the price of these may both be controlled by legislation. If an index for an item whose increase is a result of changes in law is included under Sub-Clause 13.8, the Employer should be able to argue that, though the Contractor may have suffered Cost as a result of this change in law, such Cost is not in fact additional Cost as he has an entitlement to recover under Sub-Clause 13.8. However if there is no indexing of a particular item affected by the Change in Legislation, this Sub-Clause will apply

Base Date is defined in Sub-Clause 1.1.3.1 as the date 28 days prior to the latest date for submission of the Tender.

The definition of Laws in Sub-Cause 1.1.6.5 is very wide – covering all national (or state) legislation, statutes, ordinances and other laws, and regulations and by-laws of any legally constituted public authority. However it is not so wide as to cover changes in law which affect the Country, even though they are not made in the Country. An example would be a sanctions regime imposed on nationals of a particular country working in the

Country in which the Works are being carried out. Although such sanctions may lead to increased costs and or delay, they are not compensable under this Sub-Clause. The Contractor affected by sanctions and other similar external changes of law, will need to consider whether he has a claim based on Clause 19 [*Force Majeure*]. In an extreme case a Clause 19 [*Force Majeure*] claim may also be a more appropriate basis for a claim by a Contractor affected by domestic changes of legislation.

In some extreme cases governments have resorted to legislation to prevent a contractor continuing its works. One of the most notorious is the case known as the "Pyramids" case[25] in which the Government of Egypt passed legislation which effectively prevented the contract being carried out. The construction company, victim of this change of legislation engaged in years of creative arbitration in which it tried to argue that the Government as owner of its Employer should be able to be joined as a party in arbitration and be subject to a claim for damages. The Contractor was unsuccessful because of the nature of the State ownership of the Employer, but the principle was established. Since then the courses open to a Contractor affected by State interference in its contracts (not merely by changes of the law) has been made easier as a result of the conclusion of Bilateral Investment Treaties ("BIT's") between many countries. Under these treaties foreign contractors are treated as "investors" and are entitled to protection against discriminatory treatment and against state action which has the effect of expropriating some of their rights. Many treaties also bind States to abide by the terms of their contracts with foreign investors and may in some circumstances provide an alternative means of redress where the State is the Employer.[26] Under most BIT's the investor has the right to make a claim directly against the states party to the treaty. Sub-Clause 13.7 gives substantially equivalent rights with one serious limitation. The Contractor is entitled to its Costs but not to loss of profit.

Sub-Clause 13.8 Adjustments for Changes in Cost

This provision only has effect if the Parties establish a table of adjustment data in accordance with it. The table is to be included in the Appendix to Tender. Once applied the Sub-Clause entitles the Contractor to an adjustment to all amounts paid to it to take into account rises or falls in the cost of Labour, Goods and other inputs to the Works. The Sub-Clause sets out a formula which will be the basis for such calculations. Even if there are rises or falls in Costs which are not covered by this or other Clauses, the Contract Price will not be altered.

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[25] *SPP (Middle East) Ltd, Southern Pacific Properties Ltd., v Arab Republic of Egypt General Company for Tourism and Hotels* ICC Award 2493 and subsequent decisions of the Paris Cour d'Appel (1984) 23 ILM 1048 and the Cour de Cassation 6 January 1987, (1987) 26 ILM 1004.

[26] The texts of Bilateral Investment Treaties are available at http://www.unctadxi.org/templates/DocSearch____779.aspx and for contractors working internationally it is worth checking whether their home country and the country they are working in has a BIT.

The table generally lists a number of items included in the Contract and the Contractor proposes an index for each item and a base cost. These are then totalled to produce an overall index which is applied to all prices when changes have to be made.

The index does not have to be calculated in the currency in which payments are to be made, but if it is calculated in another currency, that currency has to be converted into the relevant currency at the selling rate established by the currency's central bank.

There is provision for the Engineer to determine a provisional index if none is available at the time the calculation is to be made. This can then be adjusted later.

If the Contractor has not completed by the Time for Completion any adjustment is to be calculated on the basis of indices or prices applicable 49 days prior to the Time for Completion or at the current level – whichever is most beneficial to the Employer.

The weightings of the factors in the table of adjustment data may only be adjusted if they have been rendered unreasonable, unbalanced or inapplicable as a result of Variations.

The draft Appendix to Tender sets out a sample of what is intended by the Table of Adjustment Data:

Coefficient: Scope of Index	Country of origin: Currency of index	Source of Index: Title/definition	Value on stated date(s) Value Date
A=0.10 Fixed			
B=0.20 Labour			

On a careful examination of the formula it can be seen that the choices made by the Contractor carry considerable risks. The adjustment number is applied to all amounts payable to the Contractor on the applicable date. This adjustment number is the product of a formula listing a number of indices and the proportions that they form of the total figure. Thus, for example, if, as suggested in the draft table above, the Contractor chooses to make the labour cost adjustment .20 of the total adjustment and wages increase by 20%, while other prices stay stable, the total value of the adjustment will be 20% of 20% - i.e. 4%. If labour constitutes 50% of the Contractor's cost base he will suffer a real increase in cost of 20% of 50% of his total costs – i.e. 10% but, as a result of the formula will only recover 4%. If the Contract is being entered into at a time of great market instability, or if the cost of one particular input increases well beyond market expectations, the Contractor may find himself well out of pocket. If, on the other hand, the cost of one item which has a high weighting in the index increases well beyond market expectations, while other prices increase as expected, the Contractor may enjoy a windfall.

By: George Rosenberg (Consultant) and Andrew Tweeddale