Chapter 14
# Variations

## *14.1 Introduction*

Use of the word 'variations' in building contracts usually refers to a change in the Works instructed by the architect, contract administrator or the employer as the case may be (but see the quite different 'variation of contract' considered in Chapter 4, Section 4.3). There are clauses permitting variations in all standard form contracts. If there was no such clause in lump sum contracts, the contractor could not be compelled to vary the Works and it could insist upon completing precisely the work and supplying precisely the materials for which it has contracted. No power to order variations would be implied.[1] Although standard contracts contain a clause permitting variations, the power is not unfettered. A variation may not be ordered if it changes the whole scope and character of the Works. To determine whether this has been done in any particular case, reference must be made to the recital which sets out the work to be done. As a broad rule of thumb, if the variation does not invalidate the description in the recital, it is unlikely to be a variation which changes the whole scope and character of the Works. To a large extent the point is academic, because a contractor will usually welcome the opportunity to carry out additional work and thereby earn money in the valuation of the variation and possibly in the formation of a claim for disruption or prolongation.

Variations will happen in every contract and the chances of any contract being completed without any variation to the Works whatsoever, is so small as to be negligible. The problem is the innate complication of the building process and the fact that it is almost impossible for any employer to finally decide on every part of a building before it is constructed. There are, of course, other instances where variations are virtually imposed upon the employer in buildings with a high technical content such as hospitals, media studios and concert venues. No employer wants to feel that the finished building is already out of date so the instructing of often substantial variations will continue throughout the life of the project. In addition, there are many employers who are just incapable of visualising the finished building until it is actually or very nearly completed. The building as tendered will bear a general resemblance to the finished product in these instances, but no more. As the building

[1] *Stockport MBC v O'Reilly* [1978] 1 Lloyd's Rep 595.

*Building Contract Claims*, Fifth Edition. David Chappell.

begins to take shape, so the employer has second thoughts about almost everything. The construction process becomes a nightmare for all concerned. Other reasons for variations include questions of timing of the project. Often an architect is asked to achieve a start on site long before it is realistic to do so. Unless the architect is firm in those circumstances, the scene is set for disputes over costs at a later date.

Sometimes a contractor will argue that it is not prepared to carry out an instruction requiring a variation unless the price is agreed first. Although most standard forms provide for the cost of a variation to be agreed first if the employer or architect so desires, the contractor is usually required to comply with any architect's instruction forthwith subject only to the right of reasonable objection in certain circumstances. It would not be classed as a reasonable objection if the contractor objected to carrying out the instruction until the price had been agreed. The scheme of most standard forms is that, unless the employer or architect wish to agree the price first, the contractor must comply with the instruction and the valuation is whatever (usually) the quantity surveyor decides. If the contractor dislikes the valuation and subsequent certification, its remedy lies in the dispute resolution procedures in the contract.

## *14.2 The baseline*

Before there can be a variation, it is essential to know what is being varied. Although this sounds trite, it is of fundamental importance. Given that a particular contract allows the architect or the employer as the case may be to instruct variations, a baseline must be established which amounts to the total amount of work which the contractor agreed to do by executing the contract. Although it is blindingly obvious that a variation cannot be instructed unless it is clear what is being varied, it is surprising how often that point is overlooked in administering the contract. In some instances, it may be unclear whether or not an instruction amounts to a variation or whether the contractor has already agreed to do what is instructed by the variation as part of the contract.[2]

The position can be uncertain where the contract documents consist only of the printed contract form and a set of annotated drawings. This was sometimes encountered when MW and its predecessors were being used with drawings only, but is thankfully now relatively rare. The use of MW, MWD, IC or ICD with drawings and specifications or schedules of work make it easier to decide what is included in the contract. However, where contracts incorporate bills of quantities, the accuracy of which is guaranteed by the employer, anything involving a change from what is included in the bills will involve a variation.

It is important to consider more closely the position where there are bills of quantities. SBC and, since the 2005 edition, IC and ICD all guarantee that where there are bills of quantities, they will have been produced in accordance with the Standard Method of Measurement (SBC clause 2.13.1 and IC and ICD clause 2.12.1). Moreover SBC, IC and ICD state that the quality and quantity of the work included

[2] *Sharpe v San Paulo Railway* (1873) 8 Ch App 597.

in the contract sum will be what is in the contract bills or, in the case of a contractor's designed portion, what is in the CDP documents (clauses 4.1 and 4.1.1 respectively).

Although SBC clause 2.14.1 and IC and ICD clause 2.12.2 are similar in intent, the wording is somewhat different. SBC clause 2.14.1 provides that errors in the contract bills are to be corrected and treated as variations. The errors include an unstated departure from the method of preparation of the bills or errors in description, quantity or omissions and include errors or omissions in the information to be provided in the case of a provisional sum for defined work. IC and ICD clause 2.12.2 is to similar effect. However, whereas SBC provides in clause 2.14.3 that any such correction is to be treated as a variation, IC and ICD allow no such 'treating' provision. Clause 2.13.1 requires the architect to issue instructions and then clause 2.14, perhaps unnecessarily, states that such instructions are to be valued as variations. The effect of these clauses is that the employer has guaranteed the accuracy of the bills of quantities to the extent of agreeing that the contract sum shall be adjusted to take account of any errors of the kind listed. Obviously, the errors described do not include errors in the pricing of the contract bills. SBC, IC and ICD clause 4.2 make clear that errors in calculating the contract sum are accepted by the parties.

Thus, even before the employer decides that something needs changing, the contract itself may generate an instruction requiring a variation. What this means is that the contractor has contracted, for the contract sum, to carry out only what is shown in the contract bills, and not necessarily, for instance, what is shown on the contract drawings if they differ from the bills. However, the wording of SBC, IC and ICD make clear that the contractor has contracted to construct what is in the contract documents, therefore, the contractor cannot refuse to carry out any work which is different from that shown in the bills if it is shown on the drawings and if it is instructed to be constructed in accordance with the drawings rather than the bills, it will amount to the correction of a discrepancy and amount to a variation. Discrepancies are dealt with by SBC clause 2.15 and IC and ICD clause 2.13 (IC and ICD refer to 'inconsistencies'). These clauses state that if the contractor becomes aware of any discrepancy or divergence in or between the contract drawings, the contract bills, architect's instructions (excepting of course instructions requiring variations) and any further drawings or documents issued by the architect to it must immediately notify the architect in writing and the architect must then issue instructions. Any such instruction must be of a kind that is expressly empowered by other clauses of the contract conditions and it must have regard to the discrepancy.

## *14.3 Bills of quantities*

There are perceived disadvantages in using bills of quantities. The perception probably originates in the old legal principle that, unless there are express provisions in the contract to the contrary, a contractor will be expected to do everything necessary in order to complete the contract Works, quite irrespective of whether the necessary work is expressly referred to in the contract documents and even if it is not possible

to foresee the necessity for the work at the time of tender.[3] Many old cases deal with the contractor's duty under certain circumstances to carry out work which is not shown in documents provided at the time of tender.[4] An example is *Williams v Fitzmaurice*[5] where the specification did not mention floorboards. The specification did say:

> 'the whole of the materials mentioned or otherwise in the foregoing particulars, necessary for the completion of the work, must be provided by the contractor'.

It was held that the provision (and therefore the laying of the floor boards) was included in the contract and the contractor was not entitled to recover for them as an extra.

Most of these cases date from the nineteenth century. The common law has moved on and it may well be that some or, indeed, all such cases would have a different outcome on the same facts before a modern court. Generally, if a document is provided to a contractor in the knowledge that it is obliged to rely on it in the preparation of its tender, such as a modern contract with bills of quantities, the courts will require very clear words in a contract or in the document itself before it will hold that an employer should not be responsible for errors or omissions in it.[6] However, where there are no bills of quantities guaranteed to be accurate, the decisions in some of the old cases may still have relevance. In the *Williams* case, the general clause noted above appears to have been the key factor in the decision. Moreover, following developments in the reliance doctrine set out in *Hedley Byrne & Co Ltd v Heller & Partners Ltd*,[7] a contractor tendering on the basis of documents provided which state that errors will not be adjusted and paid for, may be able to bring an action in the courts directly against the person who prepared the quantities if it can be shown that they were negligently prepared.[8]

In *Bowmer and Kirkland Ltd v Wilson Bowden Properties Ltd*[9] the bills contained the following paragraph:

> 'where and to the extent that materials, products and workmanship are not fully specified they are to be:
>
> (1) suitable for the purpose of the Works stated in or reasonably to be inferred from the Contract Documents
> (2) in accordance with good building practice, including the relevant provisions of current BSI documents.'

The court concluded that the paragraph meant that if the materials and workmanship were fully specified, the contractor had carried out its obligation by doing what

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[3] *Thorn v London Corporation* (1876) 1 App Cas 120.
[4] See for example *Tharsis Sulphur & Copper Company v McElroy & Sons* (1878) 3 App Cas 1040; *Jackson v Eastbourne Local Board* (1886) *Hudson, Building Contracts*, (4th ed) vol 2, p. 81; *Re Nuttall and Lynton and Barnstaple Ry* (1899) 82 LT 17.
[5] (1858) 3H & N 844.
[6] *Bacal Construction (Midlands) Ltd v Northampton Development Corporation* (1976) 8 BLR 88.
[7] [1964] AC 465.
[8] *Auto Concrete Curb Ltd v South Nation River Conservation Authority* (1994) Const LJ 39; *Henderson v Merritt Syndicates* (1994) 64 BLR 26.
[9] 11 January 1996, unreported.

was specified. If they were not fully specified, the contractor had the duties set out in sub-paragraphs (1) and (2). This is clearly a valuable paragraph to include in the bills of quantities from the employer's point of view.

Bills of quantities give a very precise correlation between the amount of work and materials and the price to be paid for the Works. Therefore, the risks borne by contractors in some of the old cases no longer apply. Risks such as the accidental mismeasurement or omission of work are borne by the employer. For example, if 20 metres of paving are measured in the bills and actually 40 metres are required, it is clear that under SBC, IC and ICD, the contractor will be automatically entitled to payment for the extra paving. The same outcome would be unlikely under an MW contract where drawings and specification were included as the only contract documents, and the paving was accurately shown or could be reasonably implied from the drawing. This is something imperfectly understood by many contractors engaged on small Works. It is wrong to say that the bills of quantities system has many disadvantages. If there is no doubt about the extent of the work which the contractor has undertaken that is actually a very considerable advantage to both employer and contractor. That must be to everyone's benefit in the long run, because it removes a substantial area of possible dispute. Indeed, it is thought likely that if a modern ICE contract had been used, *Sharpe's* case[10] would probably never have reached the courts at all. The employer would have had to pay for the extra two million cubic yards of earthworks, but that would have been, on the facts, the correct price for the work. If the employer had been disgruntled by that outcome, there may have been a remedy against the engineer.

Where there are no bills of quantities, a contractor may be required to allow for something which is difficult to estimate in its tender. For example, the contractor may be asked to include in its price for all foundation work whatever the sub-soil may be. Unless the contractor has had the opportunity to carry out extensive site investigations in putting together the price, it will obviously price for the severest conditions it may encounter. The employer will then be in a position of having to pay for the severest conditions even if, in reality, the contractor encounters ideal conditions. In practice, most contractors will price for something between the two extremes, but the principle remains the same. The employer is paying for the worst conditions even if the best are encountered. The merit of bills of quantities is clearly that the employer simply pays for what the contractor actually does. A provisional quantity can be included in the bills for difficult excavation, albeit not necessarily very accurate. If rock or other obstructions are discovered they can be measured. The use of bills of quantities allows a very precise allocation of risk. The Standard Method of Measurement clearly shows where those risks lie – sometimes with the employer and sometimes with the contractor – but generally on the basis of a specified amount of work against which can be set a realistic price.Bills of quantities are not suitable where the employer is seeking a firm cost for the project. Such an employer may be better using a design and build contract where virtually the whole of the risk falls on the contractor, but where the contractor effectively controls the Works. That is suitable if it is most important to the employer that a stated price for the Works will not be exceeded: cost certainty rather than cost economy.

[10] See Chapter 4, Section 4.5.

## *14.4 Functions of the architect and the quantity surveyor*

The provisions for the valuation of variations now set out in most standard form contracts have, among other things, the advantage of clearly defining the relative responsibilities of architect and quantity surveyor in respect of variations. It is clear that, under the standard form, once the architect has issued an instruction requiring a variation or requiring the contractor to carry out work against a provisional sum, responsibility for defining the financial effect of the work covered by the instruction now passes entirely to the quantity surveyor. This, of course, is subject to the architect's right and duty to be satisfied regarding the financial content of certificates.[11]

The quantity surveyor's valuation will be required to cover *all* the effects of the variation up to the point at which it becomes necessary for the contractor to make an application to the architect stating that the introduction of the work in question has affected or is likely to affect the regular progress of the Works in some material respect. At that point responsibility passes back to the architect. It is the architect who bears the responsibility for determining questions concerning the progress of the Works and, although the quantity surveyor may be brought into the matter again when ascertainment of the resulting direct loss and/or expense becomes necessary, this will only be at the discretion of the architect who still bears primary responsibility for that aspect. Although some JCT contracts include provision for the contractor to submit its own calculation of the valuation, the quantity surveyor is still responsible for checking that valuation. It has been said, of the quantity surveyor under JCT 63 that his

> 'function and his authority under the contract are confined to measuring and quantifying. The contract gives him authority, at least in certain instances, to decide quantum. It does not in any instance give him authority to determine any liability, or liability to make any payment or allowance.'[12]

The judge went on to deal with the words 'the valuation of variations . . . unless otherwise agreed shall be made in accordance with the following rules' in clause 11 (4), JCT 63, which counsel had submitted meant 'agreed by or with the quantity surveyor'. He said:

> 'I reject that submission. In my view the word agreed can only mean "agreed between the parties", although it may well be that on occasion a quantity surveyor may perhaps be given express authority by the employer to make such an agreement.
>
> But the JCT contract does not give him the authority.
>
> There are few express references to him in the contract. He is defined in Article 4 of the Articles of Agreement. By clause 11(4), he is given the express duty of measuring and valuing variations.
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> By 11(6), he is given the duty of ascertaining loss and expense involved in variation – but only if so instructed by the architect.

[11] *R B Burden Ltd v Swansea Corporation* [1957] 3 All ER 243.
[12] *County and District Properties Ltd v John Laing Construction Ltd* (1982) 23 BLR 1 at 14 per Webster J.

By 24(1), he is given a similar duty in respect of loss or expense caused by disturbance of the work etc – but again only if instructed by the architect.'[13]

The position appears to be largely the same under SBC.

## 14.5 JCT Standard Building Contract (SBC)

### 14.5.1 Definition

Clause 5.1 sets out the definition of 'variation' as used in the Standard Building Contract (SBC). When referring to building contracts, there are essentially two types of variation. The first is the variation of the contract terms which has already been considered in Chapter 4, Section 4.3. The second is variation of the Works which the contractor has undertaken to carry out under the contract terms. Clause 5.1 defines variations to the Works, but it also deals with the imposition of any obligations and restrictions upon the contractor or any addition, alteration or omission of them if they are already imposed in the contract bills or in the Employer's Requirements related to contractor's designed portion work. Such obligations and restrictions are not the Works and more in the nature of contract terms. Some implications of that are discussed below.

### 14.5.2 Variations

#### *Scope*

It may appear that clause 5.1.1 defines variation in an almost unlimited way, so that anything and everything is included. For example, clause 5.1.1.1 refers to addition, omission or substitution of any work. If that were strictly correct, the architect would be able to instruct virtually anything. However, a single phrase in the contract must not be taken out of context. Indeed the contract must be read as a whole (clause 1.3) and in this instance the key provision which governs the whole of clause 5.1.1 is the general meaning of the reference to alteration or modification of the design, quality or quantity of the Works. Clause 5.1.1 states that the sub-clause referring to 'any' work is included within the governing meaning. Therefore only the Works described in the contract documents are subject to variation. The architect has no power to instruct, as a variation to the contract Works, work to property outside the site boundary. Thus, an employer may own property near the site and may think it more economic to get the contractor carrying out one project to do some other work at this property while carry out the contract Works. The architect has no power to instruct any variations, whether by way of additions, omissions or changes requiring the contractor to execute work clearly not contemplated by the original contract.[14]

The Works are defined as the works in the first recital, the contract documents, including any contractor's designed portion and any changes made in accordance

[13] *County and District Properties Ltd v John Laing Construction Ltd* (1982) 23 BLR 1 at 14 per Webster J.
[14] *Sir Lindsay Parkinson & Co Ltd v Commissioners of Works* [1950] 1 All ER 208.

with the contract. Therefore, if an architect issues an instruction adding some work, that immediately becomes part of the Works which the architect may vary by further instruction. The architect cannot substantially alter the nature of the Works, for example by changing a traditionally constructed building into a building constructed from a kit of parts. The contractor may be entitled to argue that it was a building substantially different from that for which it tendered. It is probable that the architect cannot validly instruct the contractor to build something substantially in excess of, or substantially less than, what was envisaged under the contract. In essence, the guiding principle is that the Works as completed must still be capable of identification as the Works set out in the first recital.

On a casual reading, the wording of clause 5.1.1.3 might appear to rank an instruction issued by the architect under clause 3.18.1 as a variation. It requires careful reading in its new abbreviated form to see that the removal from site of work and materials constitutes a variation except where they are removed because they are not in accordance with the contract. It could be confused in practice with 3.18.1 which empowers the architect to issue instructions to the contractor to remove from site work and materials not in accordance with the contract. Obviously, that would not rank as a variation and the contractor would not be entitled to extra money. However, this clause is at pains to highlight the difference and relates to specific instructions for work or materials which are in accordance with the contract, but which for some reason the architect wishes to remove from the site of the Works either temporarily or permanently.

### *Obligations or restrictions*

Clause 5.1.2 allows the imposition of obligations and restrictions upon the contractor and to change obligations and restrictions already imposed through the medium of the contract bills in respect of five specific matters, that is:

(1) access to the site;
(2) use to be made of specific parts of the site;
(3) limitations of working space available to the contractor;
(4) limitations of hours to be worked by the contractor; and
(5) requirements that the Works be carried out or completed in any specific order.

There are some curious features about this clause. First, it is strangely worded. Effectively, it seems to be varying the contract. It is certainly not varying the Works. Perhaps that is why the draftsman refers to the employer. At first sight it appears to be the only variation which the contract expressly authorises the employer to make.

Second, reading clauses 5.1.1 and 5.1.2 together makes clear that the term 'variation' means the imposition by the employer of any obligations in regard to the matters set out in clauses 5.1.2.1–5.1.2.4. However, clause 3.14.1 expressly states that the architect may issue instructions requiring a variation. There is no qualification on that power in the rest of the clause or, indeed, in the rest of the contract. It is true that clause 3.14.2 states that such an instruction is subject to the contractor's right of reasonable objection in clause 3.10.1, but that does not qualify the architect's power to issue such instructions, it merely gives the contractor the right to reasonably

object to such instructions when properly issued. Therefore, the architect may issue instructions in regard to clause 5.1.2 matters. The conclusion to be drawn from this is that if the employer imposes obligations or restrictions or changes them, as set out in clause 5.1.2, it clearly ranks as a variation under the terms of the contract and is to be valued accordingly. In view of the particular wording of clause 5.1.2, it is thought that, in giving an instruction requiring a variation under this clause, the architect should always refer to the imposition of obligations or restrictions by the employer.

It is doubtful whether, in practice, employers often, if ever, avail themselves of the powers apparently given to them under this clause; which is fortunate in view of the confusion which could result. What follows assumes that it will be the architect acting.

The architect's powers are limited to only those specific obligations and restrictions under clause 5.1.2, and there is no equivalent power in respect of obligations or restrictions of any other kind. It is clear that the architect's power is not confined to varying obligations and restrictions already imposed through the medium of the contract bills but extends to imposing fresh obligations or restrictions – but only of the kinds listed in clauses 5.1.2.1–5.1.2.4 and subject to the contractor's right of reasonable objection discussed below.

These five matters appear to attract little attention in practice. Imposing any of them will inevitably give rise to additional costs to the contractor; some of the restrictions may be far-reaching and it is surprising that more claims have not been founded on them. The reason is possibly because employers have adopted a sensible approach and declined to impose obligations in any of these categories unless absolutely unavoidable. Restricting access to the site or the times of such access could be quite catastrophic and where there is a need for such restriction, it should be included in the contract documents. It is more likely that architect's instructions issued under this head will be concerned with the relaxation of previously imposed restrictions.

Much the same comment can be made for the other categories. Where the architect issues instructions about the use to be made of various parts of the site, it must not be confused with failure to give possession of the whole of the site on the date of possession in the contract. Possession must be given on that date, but the architect can restrict the use. It is doubtful that this allows the architect to postpone work, because the contract must be read as a whole and the architect already has that power under clause 3.15. The architect may wish to restrict the contractor from storing certain materials, erecting cranes, siting cabins and the like. Limiting working space probably falls into the same category while limiting hours might be necessary in response to complaints and visits from local authority inspectors when the project is in progress.

The final matter gives rise to most difficulty. The correct method for conveying the employer's wishes in regard to sequence of work and completion is for the Works to be divided into sections. A strict reading of the clause suggests that although the order of completion and of carrying out the work may be varied, there is no power under this clause to require the contractor to complete parts of the Works by any specific dates if there is just one completion date in the contract. In any event, this power must be exercised with great care where the employer has also opted to divide the Works into sections and to set out individual dates for possession and completion

in the Contract Particulars. The sections must take precedence. The architect cannot alter the content of any of the sections by using clause 5.1.2.4, because to do so might invalidate the liquidated damages clause. There is no mechanism in the contract to amend liquidated damages and it may be argued that a substantial change in work content would invalidate the clause. It is thought that an instruction to carry out the work in any particular order may relate to any work if the Works as a whole are not divided into sections. Where the Works are divided into sections, the instruction can only relate to the work within any particular section and, for the reasons noted above, the work content of the sections cannot be restructured.

Clause 3.10.1 refers to the contractor's right of objection only to the extent that it is an objection to an instruction. Therefore, if the obligations or restrictions have been imposed in the contract, no objection is possible. That makes perfect sense, because the contractor would be aware of the restrictions at the time of tender or, at the latest, when it executed the contract. What is puzzling is that although clause 3.10.1 plainly allows the contractor to refuse compliance to the extent that it notifies a reasonable objection, reading clause 3.10 with clause 3.14 the inescapable conclusion is that the contractor's objection to compliance with a instruction related to clause 5.1.2 is only possible if the instruction is an architect's instruction. The real difficulty in deciding what constitutes reasonable or unreasonable objection is that the contract provides for the variation to be valued and, therefore, the contractor should be properly recompensed no matter what restrictions are imposed or altered.

By what criteria is 'reasonable objection' to be measured? It is thought that an objection would only be considered reasonable to the extent that compliance would make the Works much more difficult to achieve. Clearly, if the restriction actually made the Works impossible to complete, the contractor would be relieved of its obligations. Therefore, the clause must envisage a lesser consequence, but nevertheless a consequence which caused significant difficulties. For example, a neighbour may threaten to seek an injunction against the employer to prevent work outside certain hours, resulting in an average two hours lost every day. The architect may issue an instruction restricting the hours accordingly. Obviously, no contractor could lodge a reasonable objection to compliance with such an instruction, because although it would inevitably cause a delay, the contractor would receive payment for the variation and also an appropriate extension of the contract period. Therefore the contractor would be suitably protected and the alternative would be that the neighbour may get an injunction in any event and the contractor would be faced with the same restriction to which no objection could be termed 'reasonable'. On the other hand, if an architect had instructed that a contractor could not make full use of the site and that a certain area should not be used a contractor could make reasonable objection if the result was that the contractor had insufficient working space to store essential goods and erect suitable site accommodation. In practice there appear to be few disputes based on this clause, because common sense prevails.

### *Provisional sums*

Provisional sums are sums of money which are included in the contract bills to cover work which was uncertain in nature and/or scope at the time the bills were prepared.

They must not be confused with prime cost (PC) sums which are included to cover work to be executed by nominated sub-contractors or materials to be supplied by nominated suppliers where they survive in some contracts. Nominated sub-contractors and suppliers, although included in JCT 98, have been omitted from SBC.

Clause 3.16 obliges the architect to issue instructions for the expenditure of such sums whether included in the contract bills or in Employer's Requirements associated with a contractor's designed portion of the Works. There is no express limitation on the instructions that the architect may issue in this regard, and often an instruction may, indeed, be simply to omit the sum altogether and to do no work or spend no money against it. It used to be the fashion for architects to issue an instruction at the commencement of a contract omitting all provisional sums and then adding back various corresponding amounts of work at intervals throughout the contract. Although it is arguable that the contract permits that, it does not appear to comply strictly with clause 3.15 which expressly requires the architect (as a duty rather than a power) to issue instructions about the expenditure of provisional sums. Simply to omit the sum cannot be construed as an instruction to expend it. Better practice is for the architect to issue instructions about provisional sums as and when they are necessary, so that if it becomes clear that a sum is not required, it may be omitted; otherwise the instruction will instruct the sum to be omitted and a particular parcel of work to be added.

The Standard Method of Measurement and the contract divide provisional sums into defined and undefined provisional sums. The concepts of defined and undefined provisional sums and approximate quantities were introduced into what was then JCT 80, in July 1988. Briefly, the situation is this.[15] Where work can be described in items in accordance with the Standard Method, but accurate quantities cannot be given, an estimate, called 'approximate quantity' must be given. If the work cannot even be described in accordance with the Standard Method, it must be listed as a provisional sum. Provisional sums are either defined or undefined. If 'defined', the bills must state the nature and construction, how and where the work is fixed to the building and any other work fixed to it, quantities giving an indication of the scope and extent of the work and any specific limitations. If any of this information cannot be given, the work is 'undefined'. The distinction is of particular significance in regard to extension of time and claims for loss and/or expense and when valuation is necessary (see below).

### 14.5.3 Instructions requiring a variation

Clause 3.14.1 empowers the architect to issue instructions requiring a variation as defined in clause 5.1. Clause 3.14.4 is important because it empowers the architect to sanction any variation made by the contractor even if the variation is not the result of an instruction. The sanction must be in writing. The architect can use this power to ratify instructions which have been given but never confirmed by either architect or contractor (clause 3.12.3 also permits this) or it may be used to sanction instructions given on site by the employer or by a consultant without the architect's

[15] A full description is to be found in General Rules 10.1 – 10.6 of SMM7.

knowledge. Whether it is wise for the architect to sanction instructions of that kind given by other parties is another question. The architect cannot be obliged by the employer to ratify the employer's instructions and the architect is entitled to deal only with instructions properly issued under the terms of the contract. It has already been seen that, with the possible exception of clause 5.2 restrictions and obligations, the only person authorised by the contract to issue instructions is the architect.

It is a pity that the JCT still include, in clause 3.14.5 the otiose provision that no variation shall vitiate the contract. Although the statement is perfectly correct, it is unnecessary, because the exercise of a power expressly conferred upon the architect by the terms of the contract cannot vitiate the contract in any circumstances. The contract cannot be brought to an end by the doing of something which the contract itself expressly permits, unless of course that something is itself for the purpose of bringing the contract to an end.

Clause 3.16 states that the architect shall issue instructions in regard to the expenditure of provisional sums in the contract bills or in the Employer's Requirements.

Clause 3.10 requires the contractor forthwith to comply with any instruction issued by the architect which is expressly empowered by the contract conditions. Clauses 3.14.1 and 3.16, therefore, set out this express power of the architect to issue instructions requiring variations and in regard to the expenditure of provisional sums. The issuing of instructions about the expenditure of a provisional sum is a duty rather than a right. Therefore, the contractor must comply with any such instructions forthwith, subject to the proviso regarding reasonable objection to instructions about variations in obligations or restrictions imposed upon the contractor. 'Forthwith' in this context does not necessarily mean 'immediately', because the instruction may vary work not yet done, but it imposes an obligation upon the contractor to carry out the work as soon as it reasonably can.[16]

By clause 1.7.1 all architects' instructions must be issued in writing; any instruction of the architect not issued in writing is therefore not issued in accordance with the contract and is of no effect. By clause 3.12, however, any instruction of the architect issued otherwise than in writing is to be confirmed in writing by the contractor to the architect within 7 days, and if not dissented from in writing by the architect within a further 7 days from receipt (not despatch) is to take effect from the expiry of the second 7 days. Because the time runs from receipt, a prudent contractor will send such confirmation by special delivery post or some other system which guarantees delivery on the next business day. If the architect confirms the instruction in writing within the first 7 days, the contractor need not confirm it itself, but it will take effect from the date of the architect's confirmation. If neither the contractor nor the architect confirms the instruction within the time limit, but the contractor nevertheless complies with it, then the architect may confirm it himself at any time prior to the issue of the final certificate, and the instruction will then, strangely, be deemed to have taken effect from the date it was originally given. That provision could result in interesting problems of interpretation.

Therefore, the contractor is under no obligation to comply with an architect's instruction which is not issued in writing. Usually, that means orally. The situation is that if a contractor complies with an architect's oral instruction and there is no

[16] *London Borough of Hillin gdon v Cutler* (1967) 2 All ER 361.

written confirmation by either party, the contractor is actually at risk if it does so, because the architect may withdraw it or even forget or deny that such an instruction was ever given. The contractor's duty to comply with an instruction only arises when the instruction is properly given under the terms of the contract. If not in writing, it is usually when the contractor has itself confirmed the instruction within 7 days of issue and has allowed a further 7 days for any written dissension by the architect, a total period of at least 14 days from the actual date upon which the instruction was issued orally. Alternatively, the instruction is properly given if issued orally, but confirmed in writing by the architect within 7 days.[17] The architect may, but is not obliged to, confirm an instruction after it has been carried out. However, if for any reason the architect declines to ratify an instruction, the contractor may be unable to recover any cost involved. Although, in theory, a contractor which carries out an instruction which has not been properly issued is in breach of contract by executing something not in accordance with the contract, a contractor's compliance with an unconfirmed instruction of the architect has been held to be a good defence against a breach of contract.[18] Obviously, it would be necessary for the contractor to be able to prove that such an instruction had been issued and the issue would be a technical one, not about whether the instruction had been issued or if it had been carried out, but whether the instruction was a valid instruction. The point seems to be that, although the instruction may be invalid, simply because the contractual procedures have not been carried out correctly, the instruction having been issued albeit incorrectly, has been carried out and the compliance is not treated as a breach.

Clause 3.14.3 makes clear that an instruction with regard to the contractor's designed portion must be issued as an alteration or modification to the Employer's Requirements. There are important qualifications concerned with such instructions which are similar to those which apply to instructions issued in connection with the DB contract. Where a contractor's designed portion is used for part of the Works, a set of Employer's Requirements must be produced and the contractor responds in its tender by submitting Contractor's Proposals and an analysis of the part of the contract sum which relates to the contractor's designed portion (the CDP analysis). The Employer's Requirements are in the form of a performance specification and it is the Contractor's Proposals which identify the actual work to be done and materials to be supplied.

It should be noted that the only type of instruction possible in regard to the contractor's designed portion is an instruction to change the Employer's Requirements. The architect has no power to issue an instruction to change the actual work or materials. For example, if the CDP was the heating system, the architect would be empowered to issue an instruction changing the required temperatures, but unable to specify precisely how this was to be achieved. Clause 3.16 makes clear that instructions for the expenditure of provisional sums must relate to such sums in the contract bills or in the Employer's Requirements. If the contractor inserts a provisional sum

[17] In the absence of any special definition in the contract, a day is a 24 hour period extending from midnight to midnight. In SBC, 'Business Day' is defined, but other days are not. Although a 'Business Day' is not a Saturday, Sunday or public holiday. Clause 1.5, dealing with reckoning periods of days, refers to days only excluding public holidays.

[18] *G Bilton & Sons v Mason* (1957), unreported.

in the Contractor's Proposals or in the CDP analysis, no instruction can be issued about such a sum and it remains unexpended. It is arguable that the contractor remains entitled to the sum, but without any obligation to provide anything in exchange. In practice, such niceties tend to be ignored. However, they become very important when disputes arise.

The architect may also issue what are referred to as 'directions' for the integration of the design of the contractor's designed portion with the design of the rest of the Works. The word 'directions' is not defined. Since the contract uses both 'instruction' and 'direction', it is appropriate to believe that a somewhat different meaning is intended, otherwise one word could have been used. The distinction is not clear in ordinary usage, but one definition of 'direction' is 'guidance' which probably approximates to the intended meaning. Under clause 3.4, the architect may issue directions to the clerk of works who may issue directions to the contractor. Clearly something less than instructions is intended here. There is a presumption that a contract has been drafted so that use of the same word will convey the same meaning wherever it is used. Likewise use of a different word will be presumed to convey a different meaning.[19] Therefore, the meaning of 'direction', wherever it occurs in the contract, should be the same and the use of 'direction' instead of 'instruction' must be assumed to convey a different meaning.

Integration with the rest of the Works is a fruitful area for claims. The contractor may contend that the architect's directions for integration unavoidably result in additional work and, therefore, cost. The situation tends to be misunderstood. The principles are straightforward even though particular circumstances may need careful consideration. There are four basic situations:

- If the invitation to tender is supported by clear documents showing the rest of the design and especially any likely interfaces with CPD work, it is a matter for the contractor to allow in the Contractor's Proposals for the proper integration of the CDP with the rest of the design. If the rest of the design, so far as it affects the CDP, remains unchanged and if the architect does not instruct a variation under clause 3.14.3 requiring an alteration in the Employer's Requirements, the contractor can have no claim for any additional cost.
- If the invitation to tender is not supported by sufficient information to enable the contractor to properly design the interface between the CDP and other work and the contract documents are executed without the ambiguity being clarified, the contractor ought to have a claim for any additional cost resulting from the architect's directions on integration.
- If the architect subsequently issues instructions regarding either the rest of the work which affects the CDP or regarding the CDP by instructing through the Employer's Requirements, the architect must issue directions on integration and the contractor ought to have a claim for additional cost.
- If the contractor is obliged to alter the CDP in order to correct its own error, the contractor must bear those costs itself even though the architect will probably have to issue some directions about the integration of the corrected CDP.

In two of the circumstances outlined above, it is said that the contractor ought to have a claim for additional costs. Those words have been chosen with care, because

[19] *John Jarvis Ltd v Rockdale Housing Association* (1986) 36 BLR 48.

common sense suggests that, where the contractor is put to additional cost due to circumstances which it could not foresee nor for which it is required to make provision in the contract, the contractor ought to be able to recover the cost from the employer. However, the contract does not provide for the architect to *direct* a variation. Therefore, it seems that directions issued by the architect under clause 2.2.2 will not give rise to variations as defined in the contract and it is only variations as defined in the contract which fall to be valued under clause 5. It is not clear how the contractor will be able to recover the cost of what would otherwise amount to a variation except, perhaps, by seeking to make an application for direct loss and/or expense under relevant matter 4.24.6.

All instructions issued in regard to contractor's designed portion work are subject to the contractor's right of reasonable objection under clause 3.10.3.

### 14.5.4 Valuation

Clause 5.2 sets out how valuations of variations are to be achieved.

#### *Valuation by measurement*

The contract makes clear that all variations instructed by the architect, anything which the contract provides is to be treated as a variation, work carried out in compliance with an architect's instruction to expend a provisional sum in the contract bills or in the Employer's Requirements, and any work for which an approximate quantity has been included in the contract bills or in the Employer's Requirements must be valued, as a first option, by agreement between the employer and the contractor. Note that it is the employer and not the architect or even the quantity surveyor who must agree. Of course, in practice, such agreement between the two parties to the contract is very rare, certainly where valuation is concerned, if for no other reason than that the employer seldom has the necessary expertise. If the parties do not agree on a valuation, they are still free under the contract to decide on a system of valuation. It is only if they neither agree a value nor a system of valuation that clause 5.2.1 states that the value is to be calculated by the quantity surveyor in accordance with the valuation rules in clauses 5.6–5.10 or, if a variation to CDP work, clause 5.8. It is only variations which are the subject of variation quotations under clause 5.3 and schedule 2 which are not subject to the measurement rules.

In respect of each individual item of measured Work, but only to the extent that it is capable of being measured, there are three criteria to be considered in relation to the work measured in the contract bills: whether the work is of similar character to that work; whether it is executed under similar conditions; and whether it significantly changes the quantity of work. The rules provide that:

- If all three criteria are the same as those related to an item of work already set out in the contract bills – i.e. if the character and conditions are similar and the quantity is not significantly changed by the variation – the rate or price set out in the contract bills against that item must be used for the valuation of the variation.
- If the character is similar to that of an item of work set out in the contract bills, but the conditions are not similar and/or the quantity is significantly changed

from the contract bills, the rate or price in the contract bills against that item must still be used as the basis of the valuation of the item but must be adapted so as to make a 'fair allowance' (more or less money), to allow for the changed conditions and/or quantity.

- If the work is not of similar character, it must be valued by the quantity surveyor at fair rates and prices and the rates and prices in the contract bills are no longer relevant.

It is clear that, if the character of the work to be measured is similar to that of an item which is already in the contract bills and to which a rate or price is fixed the quantity surveyor must use the rates set out in the bills in order to carry out the valuation. A change to those rates can be made only if there is a change in the conditions in which the work is carried out or if there is a significant change in its quantity. The quantity surveyor's discretion only comes into play if the character of the measured work is not similar to anything in the bills. Then the quantity surveyor may make a fair valuation of the work. Therefore, the key word in these rules is 'similar' and it is important that the meaning of the phrase 'similar character' should be properly understood. The JCT has not seen fit to formally define it, presumably relying on its ordinary English meaning. Unfortunately, it is this phrase which seems to have caused a great deal of difficulty in practice. Various commentators have interpreted it in different ways. One view is this (referring to IFC 98, but the principle is the same):

> 'If the instruction requiring a variation alters in any way [the] description of the work, it must therefore become different and may well in fairness be deserving of a different rate. To interpret the words in any other way will be to prevent the quantity surveyor from applying a fair valuation where the varied description of the item, although arguably remaining of a similar character to the original, justifies a different rate. Furthermore, the last few lines of clause 3.7.4 [*similar to the last few lines of SBC clause 5.6.1.2*] makes it clear that due allowance for any change in conditions is made only where the work has not been modified other than in quantity so that the character of the work itself must remain unchanged.'[20]

That appears to be taking the meaning too far. The passage is suggesting that 'similar' means 'the same' or even 'identical'. That cannot be correct. The ordinary meaning of 'similar' would be 'almost but not precisely the same' or 'identical save for some minor particular'.[21] The words 'similar character' when applied to an individual measured item of work probably mean that the item is virtually identical to an item in the contract bills. If the item is of 'similar character' the only grounds upon which the quantity surveyor can vary the price for the item from that which is set out in the bills is that the conditions are not similar or the quantity has significantly changed, otherwise the quantity surveyor must use the price in the bills as it stands. 'Similar' must be read in context. It appears that very little change in description would be needed to render the character of work dissimilar for the purpose

[20] Neil F Jones & Simon Baylis, *Jones & Bergman's JCT Intermediate Form of Contract* (1999) 3rd edition, Blackwell Science at p.172.

[21] David Chappell, Michael Cowlin and Michael Dunn, *Building Law Encyclopaedia* (2009), Wiley-Blackwell p. 494.

of this clause. Then, the rules set out in clauses 5.6.1.1 and 5.6.1.2 cannot be applied and the quantity surveyor is given the unfettered discretion under clause 5.6.1.3 to value the item at a 'fair' rate or price. It is probably necessary to look beyond the straightforward description or measurement in determining whether the rates and prices in the bills are to be set aside and a valuation at 'fair rates and prices' substituted.

The word 'similar' is also used to qualify 'conditions'. Again, it is thought that the word does not mean identical or the same, but that its meaning is unchanged from the meaning when it is used to qualify 'character'. However, there are different considerations. It is possible to precisely define the 'character' of an item by its description in the contract bills. It is not possible to closely define the conditions under which it is to be carried out. Therefore, whether the conditions are 'similar' is to be decided by considering what conditions the contractor ought to have reasonably anticipated in light of the available information when the contract was executed. Therefore, the 'conditions' referred to in the valuation rules are the conditions to be derived from the express provisions of the contract bills, the drawings and other documents. The quantity surveyor is not entitled to take into account the background against which the contract was made.[22]

The word 'similar' is not used to qualify 'quantity', the criterion used here being whether or not the quantity had been 'significantly changed' by the variation. A small change in quantity may be significant for some items (especially if the original quantity was small) but a very large change may not be significant in other circumstances. There are no precise rules and it is a matter for the quantity surveyor's experience and judgment in each particular case. It is normal to assume that large increases in quantity require reductions in the rate and vice versa. However, that may not always follow.

It is not always appreciated that the rate or price in the contract bills must be used as the basis of calculation of price and it can be adjusted only to take account of changed conditions and/or significantly changed quantity. Where a contractor puts in a rate which is obviously far too low or far too high, there is no means of altering it. Clause 4.2 states that the contract sum can be adjusted only in accordance with the express provisions of the contract. Therefore, if the contractor has made a mistake and no one notices until the contract is executed, the contractor is left with the consequences. It is often thought that, if a rate is clearly erroneous, the quantity surveyor, when valuing variations, is entitled to correct the rate and change it to a reasonable rate before using it as a basis for the valuation. That is incorrect. The contractor has agreed under the terms of the contract to carry out variations to the Works, and the employer has agreed to pay for them on the basis of clause 5. The valuation rules do not say that the rates and prices shall form the basis of valuation after the quantity surveyor has accepted that they are reasonable rates. The quantity surveyor may only work with the rates and prices in the bills and has no power to change them. Neither employer nor contractor can avoid the consequences of bill rates being too high or too low.[23]

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[22] *Wates Construction (South) Ltd v Bredero Fleet Ltd* (1993) 63 BLR 128.

[23] *Dudley Corporation v Parsons & Morrin Ltd*, 8 April 1959 CA, unreported; *Henry Boot Ltd v Alstom Combined Cycles Ltd* [1999] BLR 123.

A contractor will sometimes take a gamble by putting a high rate on an item of which there is a small quantity or a low rate on an item of which there is a large quantity in the expectation that the quantities of the items will be considerably increased or decreased respectively. If the contractor's gamble succeeds, it will make a nice profit. Quantity surveyors checking priced bills at tender stage will be alert to such pricing, but there is little to be done about it. It is not unlawful, but rather part of a contractor's commercial strategy.[24]

So far as the quantity surveyor's duty to determine 'fair rates and prices' is concerned, under clause 5.6.3, it is likely that the word 'fair' is to be read in the context of the contract as a whole. It is arguable that a 'fair' price for varied work in a contract where the contractor has inserted keen prices in the bills of quantities should be a similarly keen price.[25] In general, the quantity surveyor will be expected to determine 'fair rates and prices' following a reasonable analysis of the contractor's pricing of the items set out in the bills, including its allowances for head-office overheads and profit.

The rule for the valuation of omissions from the contract Works could scarcely be simpler. Clause 5.6.2 states that they are to be valued at the rates set out in the contract bills. There are certain circumstances where this may not appear to be a fair way of valuing omissions. This is particularly the case where the architect, with the consent of the employer, has instructed the contractor not to make good under clause 2.38. That is presumably why that clause makes provision for an 'appropriate deduction' to be made from the contract sum rather than leaving it to the quantity surveyor to simply omit the rate against the item in the contract bills. However, the operation of clause 5.9 must not be overlooked and, if the omissions substantially change the conditions under which other work is executed, it must be valued accordingly.

Clause 5.6.3 is important. It makes clear that, in carrying out valuation, the quantity surveyor must take into account several factors other than the prices in the contract bills for individual items or valuation at fair rates and prices as the case may be. When considering the valuation of additional or substituted work or the omission of any work or an instruction for the expenditure of a provisional sum for undefined work, the quantity surveyor must make allowance for any percentage or lump sum adjustments in the contract bills (clause 5.6.2). The sums referred to are any such percentages or lump sums which are usually to be found in the general summary at the end of the bills. They must be applied pro rata to all prices for measured work and, therefore, to all variations.

Clause 5.6.3 stipulates that the quantity surveyor is also required to make allowance, when valuing and where appropriate for any addition to or reduction of preliminary items of the type referred to in the Standard Method of Measurement, 7th edition, Section A (Preliminaries General Conditions). The clause does not actually oblige the quantity surveyor to use the rates and prices set out in the bills against such items, but simply to make allowance for any addition to or reduction of such items. However, the quantity surveyor must be able to justify the method of calculat-

[24] *Convent Hospital v Eberlin & Partners* (1988) 14 Con LR 1. The case went to appeal, (1989) 23 Con LR 112, but not on this point.

[25] Some support for this view may be extracted from the judgments in *Cotton v Wallis* [1955] 3 All ER 373 and *Phoenix Components v Stanley Krett* (1989) 6-CLD-03-25.

ing the allowance and, in practice, most quantity surveyors will use the rates and prices in the contract bills.

It must not be assumed that clause 5, taken as a whole, amounts to a broad power for the quantity surveyor to value variations. It can be seen that the quantity surveyor's power is carefully controlled and the prudent quantity surveyor will carefully read the whole of clause 5 before proceeding to value. A particular restriction is set by clause 5.10.2. This clause is often, and surprisingly, misread as though it gave the quantity surveyor the power to include something in respect of direct loss and/or expense when valuing variations. The reverse is true. Clause 5.10.2 stipulates that no allowance must be made under the valuation rules for any effect upon the regular progress of the Works or for any other direct loss and/or expense for which the Contractor would be reimbursed by payment under any other provision in the contract. The reference here is to clause 4.23. That is the only other provision in the contract under which the contractor can recover loss and/or expense. It follows that, in making any allowances in respect of preliminary items, the quantity surveyor must not make allowance for the material effect of the particular variation on the regular progress of the Works. This permits the quantity surveyor to make allowance for the less than material effect of the variation upon regular progress. It should be noted that, in stating that an allowance must be made, the contract is deliberately giving the quantity surveyor scope to do rather more, or less, than would be the case if the word 'ascertainment' had been used.

Clause 5.10.2 is quite complex. It would have been simple for the clause to state that no allowance for loss and/or expense must be made in any valuation under clause 5. The clause actually restricts the addition of loss and/or expense to the valuation only if the contractor would be reimbursed elsewhere. It does not restrict only if the contractor *has* been reimbursed, but if it *would* be reimbursed. Therefore, it is sufficient to block the addition of loss and/or expense if the contractor would (i.e. is entitled to be) reimbursed even if no reimbursement has been made. The reason for the lack of reimbursement may be because the contractor has not made application under clause 4.23. Its remedy is to do so, or because the architect or the quantity surveyor has refused or failed to ascertain under clause 4.23: the remedy is to use the dispute resolution procedures. The clause does leave open the possibility, albeit slim, that if the contractor is not entitled to reimbursement of loss and/or expense under clause 4.23, the quantity surveyor has power to address the matter in an allowance under clause 5.6.3.3. It is a matter for the ingenuity of the contractor to convincingly argue the case for loss and/or expense as part of an allowance. It is notable that clause 5.10.2 refers to *other* direct loss and/or expense and to any *other* provision in the contract. The inclusion of the word 'other' is a clear indication that the contract envisages that loss and/or expense is recoverable under clause 5.6.3.3 although to a strictly limited extent, especially where there is no material effect on the regular progress of the Works.

Clause 5.10.1 requires the quantity surveyor to make a fair valuation of any liabilities directly associated with a variation, if the valuation cannot reasonably be carried out by the application of clauses 5.6–5.9. There is no other restriction and the clause appears to oblige the quantity surveyor to make a fair valuation in such cases. Such liabilities might include the loss to the contractor where a variation to the work results in materials already properly ordered for the Works, as included in the

contract, becoming redundant. It will also include the valuation of the effect of any instruction which does not require the addition, omission or substitution of work, i.e. obligations or restrictions (see below).

Clause 5.9 takes account of the fact that a variation to part of the work can have an effect on the way in which other work, including the contractor's designed portion, must be carried out. It states that, where the introduction of a variation changes the conditions under which other work, which is not varied, is executed, the quantity surveyor must value that other work as if it had been varied. In practice, this will mean that it must be re-valued under clause 5.6.1.2: that is, on the basis of the rates and prices in the contract bills against the appropriate items adjusted in respect of the changed conditions. It may also be necessary for the quantity surveyor to make allowance for other factors such as consequential changes in preliminary items or lump sum adjustments.

### *Valuation of approximate quantities, defined and undefined provisional sums*

Provisional sums for defined work are deemed to have been taken into account in the contractor's programming and pricing preliminaries. There will be no adjustment unless measured work in the same circumstances would be adjusted. If the work is undefined, the contractor is deemed not to have made any allowance for it in programming and pricing preliminaries.

This addresses a difficulty which contractors have and which is often misunderstood. The fact is that a contractor will be unable to make any sensible attempt to programme or price preliminaries to deal with a provisional sum which may be little more than a title and a figure. For example, 'mechanical installation = £10,000' is almost meaningless. It used to be common, however, for architects to demand that the contractor made some allowance in its programme for provisional sums of this kind. Setting aside the difficulty of complying with such a request, the request itself demonstrates a lack of understanding that the 'bar' on the bar chart is, or should be, simply the result of a series of complicated calculations taking into account the way in which the work will be integrated into other work and the way in which it will be priced. General Rules 10.1–10.6 of SMM 7 usefully set out the minimum information which the contractor must know before it can plan and price the effects of the item in question.

Where work can be described in items in accordance with the Standard Method, but accurate quantities cannot be given, an estimate, called an 'approximate quantity' must be given. The valuation of work for which an approximate quantity is included in the contract bills is covered by clauses 5.6.1.4 and 5.6.1.5. Where the approximate quantity is a reasonably accurate forecast, the valuation must be in accordance with the rates for the approximate quantity. If it is not a reasonably accurate forecast, the rate forms the basis for the valuation, but the quantity surveyor is to make a fair allowance for the difference in quantity.

No allowance for either addition to or reduction of preliminaries can be made under clause 5.6.3 if the valuation relates to an architect's instruction to expend a provisional sum for defined work.

Under clause 5.9, if the contractor's compliance with an architect's instruction to expend a provisional sum:

- for undefined work; or
- for defined work to the extent the instruction is different from the description in the contract bills; or
- the execution of work for which an inaccurate approximate quantity is in the contract bills

substantially changes the conditions under which other work is carried out, the other work is to be treated as though it was the subject of an architect's instruction for a variation. This clause simply brings this kind of item under the same rules as variations to measured work. The differences highlight the extent of the contractor's knowledge about the kind of work and the amount at the time the contract was made.

### *Valuation of the contractor's designed portion*

Clause 5.8 deals with valuation of contractor's designed portion work. There is an overall stipulation that clauses 5.6.3.2 (percentage or lump sum adjustments), 5.6.3.3 (adjustment of preliminary items), 5.7 (daywork) and 5.9 (change in conditions for other work) will apply to CDP work if relevant. However, the nature of this work makes necessary the inclusion of specific provisions. Therefore, clause 5.8.1 requires an allowance to be made for the addition or omission of design work. A prudent contractor will include an hourly rate for design work in its CDP analysis. In addition, the valuation of any variations to the CDP work must be consistent with similar character of work in the CDP analysis. Echoing clause 5.6.1.2, allowance is to be made for any change in conditions or significant change in quantity. The comments already made with regard to 'similar' and significant change in quantity also apply here. If there is no work of a similar character, the quantity surveyor is to make a fair valuation. Echoing clause 5.6.2, valuation of omissions is to use the values in the CDP analysis.

### *Valuation on a daywork basis*

If additional or substituted work cannot be valued under clauses 5.6 (general rules) or 5.8 (CDP work), it must be valued as 'daywork', that is to say on the basis of prime cost plus percentages as set out in clause 5.7. This is likely to be an acceptable method of valuation to the contractor since it ensures that it will, at least, recover its costs of the work subject only to the limitations set out by the relevant 'Definition of Prime Cost' defined in the clause plus percentages to cover supervision, overheads and profit. However, the employer is unlikely to be happy with it, because there is no incentive for the contractor to work efficiently. Therefore, it is very much a tool of last resort only to be used if measurement in other ways is impossible.

The machinery set out in the contract for the submission of daywork sheets (the contract refers to 'vouchers') and the associated timescale is not ideal. The

clause states that the daywork sheets must be delivered to the architect or authorised representative for verification not later than seven business days after the work has been executed. A business day is defined in clause 1.1 as excluding Saturdays, Sundays and public holidays. Therefore, if the work is carried out on a Monday, the last date for submitting the daywork sheet will be Wednesday of the following week. That is a small improvement on the timescale set out in JCT 98 which stipulated that daywork sheets should be submitted not later than the end of the week following that in which the work has been executed. Nevertheless, it is not really workable. If the architect or representative is required to verify what is set out on the daywork sheet, in other words to vouch for its truth, it is difficult to see how the architect can do that two days later let alone in the following week. Realistically, a person can only verify something was done by actually seeing it. The presence of an operative working on a particular part of the Works can only be verified if the person verifying stays with the operative throughout the whole period. No completely satisfactory solution has been proposed for this problem.

It is usually assumed that, if there is a clerk of works, the clerk of works will be the architect's authorised representative for this purpose. That is probably because there is no other reference in the contract to the architect having a representative. However, despite the fact that the clerk of works is often referred to as 'the eyes and ears of the architect on the site', clause 3.4 states that the clerk of works, far from being a representative of the architect, is an inspector on behalf of the employer. Therefore, it is clear that the clerk of works has no authority to verify daywork sheets unless the architect specifically gives that authority. It is of course open to the architect to give that authority to anyone. In giving such authority, the architect should make quite clear in writing to the contractor and any other affected party the extent of such authority.

The straightforward and sensible way of dealing with the verification of daywork sheets, is for the contractor to give notice to the architect of its intention to keep daywork records of a particular item of work, for the architect or authorised representative to attend the site and to take records of the time spent and materials used and for the daywork sheets to be submitted for verification at the end of each day. In that way, at least, the quantity surveyor can be reasonably certain that the sheets or vouchers do represent an accurate record of time and materials. In order for this system to work properly, the quantity surveyor must notify the contractor in advance of any intention to value using daywork. It must not be forgotten that the quantity surveyor need not value using daywork; the work can be measured using one of the other methods in clause 5. Verification is normally carried out by signing the sheets. Often the magic formula 'For record purposes only' is added. However, where daywork is to be the method of valuation in any particular case, the addition of those words has little practical value and certainly does not prevent the contents of the sheets being used for calculation of payment.[26] In these circumstances it appears that the quantity surveyor has no right to substitute his or her own opinion for the hours and other resources on the sheets.[27] It has been held that where the employer has set

[26] *Inserco v Honeywell* 19 April 1996, unreported.
[27] *Clusky (t/a Damian Construction) v Chamberlain, Building Law Monthly*, April 1995, p.6.

out a system of verification by signing, but has neglected to do so, the sheets will stand without further proof as evidence of the work done unless they can be shown to be inaccurate.[28]

### *Valuation of 'obligations and restrictions'*

Clause 5.10.1 is a curious clause. It must relate to the valuation of obligations or restrictions imposed by the employer or variations to obligations or restrictions already imposed in the contract bills as defined in clause 5.1.2 and to liabilities directly associated with a Variation, already dealt with above. That is because the valuation of variations in the work to be executed under the contract or of work to be executed against provisional sums is clearly dealt with in detail by clauses 5.6–5.9; indeed the clause expressly excludes variations that can be so valued.

Clause 5.10.1 provides that a fair valuation of such variations must be made. How that is to be achieved is not stated. In the last edition dealing with the situation under JCT 98, it was thought that there was no real answer to the question. However, reflection on the new provisions in clause 5 of SBC suggests the way forward, albeit the clause itself could have been redrafted to make the intention clearer. It has already been noted that clause 5.10.2 prohibits any allowance for the effect on the regular progress of the Works or for any loss and/or expense for which reimbursement would be obtained under any other clause. The content of clause 5.1.2 is defined as variations. As such, they could fall under the relevant matter in clause 4.24.1 provided that they materially affect the regular progress of the Works. If there is no material effect or if regular progress is not affected at all, the valuation of clause 5.1.2 variations is to be carried out under clause 5.10.1, i.e. a fair valuation. However, to the extent that there is a material effect on regular progress, it falls to be ascertained under clause 4.23 provided that the contractor has made application. The contractor's prompt application is a condition precedent to the operation of the clause.

It seems likely that limiting working space or hours will have an effect on regular progress and possibly an instruction to vary the sequence of work will have a similar effect. It is less easy to see that variations to access will effect regular progress, but all the clause 5.1.2 variations will have cost implications.

### *14.5.5 Variation and acceleration quotation*

The methods of valuation by the quantity surveyor can be bypassed if a quotation under clause 5.3 is requested from the contractor.

In order to trigger clause 5.3, clause 5.3.1 provides that the architect must state in an instruction that the contractor is to provide a quotation in accordance with schedule 2. However, nothing in clause 5.3 expressly empowers the architect to make such a statement. The only clue is to be found in clause 5.2.2 which states that the valuation provisions will not apply to a variation for which the contractor has submitted a quotation and, importantly, the architect has issued a confirmed acceptance.

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[28] *JDM Accord Ltd v Secretary of State for the Environment, Food and Rural Affairs* (2004) 93 Con LR 133.

If necessary, a term would probably be implied empowering the architect to make such a statement to avoid the clause becoming inoperative.

Under clause 5.3.1, the contractor can indicate disagreement within 7 days or such other period as agreed and the instruction is not then to be carried out unless the architect issues a further instruction to that effect. In such a case the instruction will be valued in accordance with clause 5.6 as usual. Provided that the contractor has received sufficient information with the instruction, it must provide a 'Variation Quotation' not later than 21 days from the date of receipt of the instruction. Although the instruction is to be issued by the architect, the quotation must be sent to the quantity surveyor where it is open for acceptance for at least 7 days. Unusually, it appears that the contractor cannot withdraw the quotation before acceptance as it could in the course of ordinary negotiations, because in this instance, the contractor is bound by the contract terms to keep its offer open. The quotation must contain:

- The value of the adjustment to the contract sum which must include the effect on any other work. Calculations must be provided and must refer to the contract bill's rates and prices as relevant.
- Adjustment to the contract period including fixing a new, possibly earlier, completion date.
- The amount of loss and/or expense.
- The cost of preparation of the quotation.

If the architect specifically so states, the contractor must also include:

- additional resources required
- a method statement
- a base date in accordance with clause 4.22 for fluctuation purposes.

The employer has an important role to play in this process, probably because the contractor will be asked to quote particularly where it is likely that the instruction will have some significant effect on the contract in terms of additional expenditure or time. It is for the employer to accept the quotation or otherwise and, if the employer accepts, the architect must confirm the acceptance in writing to the contractor. The purpose of this acceptance is so that the architect can formally confirm that the contractor is to proceed, that the adjustment to the contract sum can be made, that a new date for completion (if applicable) can be fixed and the base date referred to in paragraph 1.2.6 is confirmed. The status of the adjustment to the completion date is acknowledged in clause 2.26 and 2.28 and the architect should not issue a separate extension of time for the same instruction. The adjustment to the completion date noted in the confirmed acceptance is to be taken into account by the architect in the normal way when considering further extensions of the contract period.

If work carried out under a confirmed acceptance is subsequently varied by the architect, clause 5.3.3 requires the quantity surveyor to value it on a fair and reasonable basis, but having regard to the figures in the quotation. That means that the quantity surveyor must take the figures into account, not that they must necessarily be followed. The clause now includes a requirement that the quantity surveyor must

include in the valuation any direct loss and/or expense resulting from compliance with such instruction. It is not clear why that is included, because this type of variation would seem to be a relevant matter under clause 4.24 which only excludes the confirmed acceptance and not any subsequent variation of it.

The provision that if the employer does not accept, the architect must either instruct that the variation is to be carried out and valued under clauses 5.6–5.10 or instruct that the variation is not to be carried out, is remarkable in one particular. There seems to be no provision for the employer or the quantity surveyor on behalf of the employer to negotiate on the quoted price. It is either to be accepted or rejected. If it is not accepted, schedule 2, paragraph 5.2 provides that a fair and reasonable amount must be added to the contract sum to represent the cost of preparation. Although the description of a 'fair and reasonable amount' is identical to what the contractor is to include in the quotation to represent its costs of preparation, it is not expressly stated that the quantity surveyor must add that same amount and it seems that the quantity surveyor has discretion to add less (but probably not more) than that amount if that appears to be fair and reasonable. However, it is thought that if the quantity surveyor did include a lesser sum, the grounds for doing so would have to be clearly stated and could be challenged by one of the dispute resolution procedures. The power of the quantity surveyor to value the cost of preparation is subject to the quotation having been prepared on a fair and reasonable basis. Demonstrating an understanding of human nature, paragraph 5.2 makes clear that the mere fact that the employer has decided not to accept the quotation is not evidence that it has not been prepared on a fair and reasonable basis.

Clause 5.3 is most important. It makes plain that, if the employer does not accept the quotation, the quotation cannot be used for any purpose at all. It must be treated as though it had never been submitted. This is to avoid the situation which could arise where the quantity surveyor uses the submitted quotation to assist in valuing an instruction issued by the architect under paragraph 5.1.1.

### 14.5.6 Payment problems

Clause 5.5 provides that an agreement under clause 5.2.1 or a valuation or confirmed acceptance under clause 5.3.3 must be given effect by adding to or deducting from the contract sum. Clause 4.4 then requires that the amount of the valuation must be taken into account in the computation of the next interim certificate. Read strictly, it might be thought that this could pose a difficulty if the amount was taken into account in the next interim certificate after the valuation has been made, but before the work has been carried out. One answer is to ensure that such valuations are not completed until the work is executed. In any event, clauses 4.10 and 4.16 state that what is to be included in interim certificates is the total value of work properly executed by the contractor. If the valuation is made before the work is properly executed, it may be taken into account in the sense of being considered, but it would not be included, because not properly executed. If the formal valuation has not been made by the time the work has been properly executed, a reasonably accurate allowance should be made for it in the next interim certificate.

### 14.5.7 Contractor's rights

The contractor has the right to make reasonable objection to carrying out certain instructions as already noted above. If the contractor and the employer do not agree the valuation and the architect does not require a variation quotation under clause 5.3, the valuation of variations is solely the function of the quantity surveyor. Neither the contractor nor the employer nor the architect has the right to be consulted during the process. The contractor's only right, under clause 5.4, is that it must be given the opportunity of being present at the time of any measurement and of taking such notes and measurements as it may require. It may be tempting to some to assume that the quantity surveyor may simply notify the contractor of the intention to take measurements on a particular date, but that if the contractor has a prior appointment the quantity surveyor, having given it the opportunity of being present, can proceed without it. However, it is thought that there must be an implied term that the opportunity given to the contractor must be a reasonable opportunity to be present and the unavoidable absence of the contractor suggests that, if possible, a new date should be fixed.

### 14.5.8 Function of the quantity surveyor

By clause 5.2.1, the default position is that all variations and all work executed by the contractor in accordance with the architect's instructions for the expenditure of provisional sums shall be valued by the quantity surveyor named in the contract. Therefore, save for any agreement between the contractor and the employer or for any variation quotation, it is entirely a matter for the quantity surveyor to determine the price to be paid or allowed in respect of a variation. During the process of valuing the results of measurement, the quantity surveyor has no duty to consult the contractor, but may proceed without it and at the end of the contract, as required by clause 4.5.2, may simply, through the architect, present the contractor with the statement of all the adjustments to the contract sum which would include a list of the variation valuations. The contractor has the option of accepting it or, in due course, to refer the matter to adjudication or arbitration at the point when it becomes enshrined in an architect's certificate.

In practice, the situation is usually quite different. The quantity surveyor will usually consult the contractor on an ongoing basis as measurement and valuation takes place, Generally, the quantity surveyor will attempt to reach agreement with the contractor, so far as that is possible, on all matters concerning measurement and valuation in order to minimise potential areas of dispute. It is obviously useful if the contractor has agreed the whole of the content of the statement of adjustments of the contract sum. It is common practice for the quantity surveyor to send the statement to the contract with a sheet inviting the contractor to sign, indicating agreement. From this practice has grown up the false assumption by some architects and quantity surveyors alike that the contractor's agreement to the statement is necessary.

On the contrary, the quantity surveyor is not obliged to obtain this agreement and can simply act alone to arrive at the statement of adjustments of the contract

sum. Indeed, the quantity surveyor probably has a duty to do so and certainly has that duty if there is a danger of missing an express contract timetable.[29] The architect does not require the contractor's agreement before issuing the final certificate.

The architect has no power to determine the valuation or indeed to influence it in any way. Occasionally, an architect will include in an instruction requiring a variation, details of the method of valuation, for example: 'the work carried out under this instruction is to be valued at the rate for brickwork in the contract bills'. That part of the instruction would be of no effect and the quantity surveyor must ignore it and strictly follow the contract rules for valuation. Whether such an instruction issued by the architect is rendered void is not clear. It probably remains valid save for the part regarding valuation, which is an instruction which the architect is not empowered to give.

Whether the architect certifies the amount valued by the quantity surveyor is another matter. Financial certification is an onerous burden and the architect must be reasonably satisfied regarding the quantity surveyor's valuation before certifying. The architect will usually do that by requiring the quantity surveyor to provide a simple breakdown with each monthly valuation. It is no part of the architect's duty to re-value the work, indeed it has been said above that an architect has no such power. But the architect must at least carry out some simple checks. If, perhaps rarely, the architect believes that the valuation is too high or too low, the architect's duty is to certify what the architect believes to be the correct amount.

## *14.6 JCT Intermediate Building Contract (IC and ICD)*

### 14.6.1 General

For simplicity, the position has been considered under ICD. It is identical to IC except for the addition of clauses and other references to the contractor's designed portion. Clause 5 under ICD is very similar to clause 5 of SBC. The provisions of ICD are slightly shorter than SBC and one or two provisions are omitted. Significant features are indicated below.

The definition of a variation in work in clause 5.1.1 of ICD is identical to that in clause 5.1.1 of SBC. The only difference in the definition of a variation in obligations and restrictions in clause 5.1.2 is that, under ICD, reference is made to imposition of obligations and restrictions in the contract documents and the definition of contract documents in clause 1.1 includes Employer's Requirements and Contractor's Proposals among other things.

### 14.6.2 Variations

The comments under this head for SBC are generally applicable to ICD.

[29] *Penwith District Council v VP Developments Ltd*, 21 May 1999, unreported.

### 14.6.3 Instructions requiring variations

Clause 1.7.1 of ICD states that all architect's instructions, which obviously include those requiring variations or relating to the expenditure of provisional sums, must be in writing. However, it is notable that ICD does not contain any provision similar to SBC clause 3.12 allowing instructions other than in writing to be confirmed by the contractor. Therefore, it is evident that the contractor is not obliged to comply with any instruction unless actually issued by the architect in writing. If the architect purports to confirm an oral instruction in writing, the effect probably amounts to no more than if the instruction had been issued for the first time at the date of the purported confirmation. Effectively, the purported confirmation is the instruction and the contractor ought not to act until the confirmation/instruction is actually received. It seems, however, that where a contractor confirms an oral instruction, it is contractually obliged to do the work described in such confirmation and it will be held to have waived its right to rely upon clause 1.7.1.[30] It is also probable that, where an architect is in the habit of issuing oral instructions without confirmation, the employer will be unable to rely on the absence of a written instruction as an excuse for non-payment.[31]

### 14.6.4 Valuation

#### *Contract documents*

The contract documentation available under ICD is extremely flexible. This is evident from the recitals. They make clear that a contract under ICD may be entered into in two ways. It may be on the basis of drawings and a document which has been provided to the contractor by the employer at the time of tendering so that it may be priced by the contractor to form the basis of its tender and ultimately of the contract sum (alternative A of the fifth recital). Alternatively it may be on the basis of drawings and an unpriced specification only (alternative B of the fifth recital). In addition, where the contractor's designed portion is operated, the Employer's Requirements, the Contractor's Proposals and the CDP analysis will form part of the contract documents in each case.

A document to be priced by the contractor under alternative A of the fifth recital may be one of three kinds:

- a full bill of quantities prepared in accordance with a specified method of measurement
- a priceable specification of Works, i.e. one set out in such a way that the contractor may attach a price to each item
- work schedules; these are schedules which have been provided by the employer and priced by the contractor (as mentioned in the fifth recital) – i.e. any document

[30] *Bowmer and Kirkland Ltd v Wilson Bowden Properties Ltd*, 11 January 1996, unreported.
[31] *Redheugh Construction Ltd v Coyne Contracting Ltd and British Columbia Building Corporation* (1997) 29 CLR (2d) 39–46; *Ministry of Defence v Scott Wilson Kirkpatrick and Dean and Dyball Construction* [2000] BLR 20.

which is neither a specification nor a bill of quantities but which in some way describes the Works and is set out so that it may be priced by the contractor to form the basis of its tender and of the contract sum.

These three documents, when priced, are referred to in the contract as the 'Priced Document'.

### *Work included in the contract sum*

Firmly at the root of the valuation procedure is clause 4.1 which states the work that is included in the contract sum. In a system of valuation which depends largely upon rates and prices set against specific items, it is essential that all parties are clear about the kind and amount of work which the contractor is undertaking to carry out for the contract sum. Where the priced document is a full bill of quantities, clause 4.1.1 provides that the quality and quantity of work included in the contract sum is that which is in the contract bills and the CDP documents. This clause gives the contract bills in ICD the same standing, so far as defining the work which the contractor has agreed to do for the contract sum is concerned, as bills of quantities have under SBC with Quantities (see the consideration of this point in Section 14.2 above).

However, where the document is not a bill of quantities prepared in accordance with a specified method of measurement, clause 4.1.2 is more complex. It provides that, if there are no bills of quantities and no quantities in either the specification or the work schedules, the way of deciding the quality and quantity of the work is to look at all the documents together. That would be fruitful ground for claims if it were not for the proviso that if there is any inconsistency between drawings and the other document (specification or work schedules), what is shown on the drawings will prevail. However, if there are quantities in the specification or work schedules, the quality and quantity of work in the contract sum is what is in the specification or work schedules.

The clause is qualified by the words 'to the extent'. So that the quality and quantity of work is that shown in the specification or work schedules *to the extent* that quantities are included. If those words were not there, the mere existence of one or two quantities in the specification or work schedules would be enough to make them the priority documents. Put simply, the clause amounts to this. If there are no quantities for a particular item, the contract documents must be read together. If there is conflict between the documents, the drawings prevail. Where quantities are shown, they prevail. That seems to be a sensible position although the JCT could perhaps have expressed it more succinctly.

Previous editions of this book have suggested that this approach to the priority of documents seemed illogical (i.e. situations where a full bill of quantities is not used but where the priced document is a specification or work schedules which has formed the basis of the contractor's tender). The nub of the criticism was that, where an employer had provided a contractor with a document on which to tender and where that tender had become the contract sum, the contents of the document ought to be recognised as the amount of work for which the contractor had priced. That should be the case irrespective of the form the document took, whether in words or

quantities. That document ought to take priority over the contract drawings so far as the priced amount of work was concerned.

On reflection, that view is probably too harsh. As noted in the previous paragraph, the omission of the words 'to the extent' would be sufficient to render the priced document containing only a few quantities the priority document. Realistically, the most accurate description of what the employer wants is probably contained in the drawings, a fact recognised by clause 4.1.2. Therefore, the clause, as it stands, means that, in the absence of a full bill of quantities, the priority documents will be the drawings and it is only where quantities have been inserted in the priced document that the quantified items take precedence. Far from being illogical, that appears to be the most accurate way of identifying the work included in the contract sum.

### *Contract sum analysis and schedule of rates*

Alternative B of the fifth recital does not require the contractor to price either specification or work schedules. It requires the contractor to supply the employer with the contract sum it requires for carrying out the Works in accordance with the drawings and specification and either a contract sum analysis or a schedule of rates on which the contract sum is based. A contract sum analysis is a type of breakdown of prices which was first introduced as a pricing document in the Standard Form of Contract with Contractor's Design 1981 (CD 81 – the forerunner of WCD 98 and DB). The analysis breaks down Works and places a sum stated against each, the whole adding up to the contract sum. It is to be provided by the contractor in accordance with the stated requirements of the employer. Therefore, it is clear that the employer must specify the form the analysis is to take when inviting tenders. There is nothing to stop the employer requiring the analysis in the form of bills of quantities. If the employer fails to specify the form, it seems that the contractor can provide the analysis in any way it wishes. However, although the contract sum analysis is a priced document for the purposes of valuing work, it does not become a contract document. As an alternative to a contract sum analysis, the employer may require the contractor to submit a schedule of rates. That is simply a list of items with prices attached. There are no measurements of work or materials, it is just the basic rates used to calculate the contract sum. However, it is not possible to add up the total of the rates to produce the contract sum. Therefore, there is no means of checking that the prices shown in the schedule actually are the prices used by the contractor in producing the contract sum. In order to check that, the architect or quantity surveyor would have to go through the process of measuring the whole project and then applying the rates. Needless to say, if the architect intended to embark on that exercise, it would be better to have bills of quantities in the first place. There is very little the architect can do to check that a contractor has not calculated its contract sum and then increased some or even all of the rates before setting them down in the schedule of rates. The contractor runs the risk that if work is omitted, the artificially increased rates will be used to value the omission to its disadvantage, but by judicious planning, likely omissions can be identified and increased rates avoided in those instances.

From the employer's point of view, therefore, the schedule of rates is an unsatisfactory document as the basis for valuing variations.

### *Valuation rules*

In IFC 98, the wording of the valuation rules requires that the valuation of work of similar character to that set out in the priced document should be 'consistent' with the relevant values set out in that document. This wording has now been amended so that the valuation rules under ICD clause 5.3 (and IC) are virtually identical to the equivalent provision in clause 5.6 of SBC and the comments under SBC are applicable here.

### *Variation and acceleration quotation*

There is no provision for the architect to invite a quotation from the contractor for a variation instruction or for the employer to invite an acceleration quotation as under SBC. However, although there is no express mechanism to govern the invitation, submission and acceptance of a variation quotation, clause 5.2 expressly makes provision for the employer and the contractor to agree the amount of a variation and there is no reason why such agreement should not be reached by way of a quotation from the contractor and acceptance by the employer.

### *Contractor's rights*

The contractor has the right to make reasonable objection to carrying out certain instructions as already noted above. Under this contract, there is no express right for the contractor to be present during measurement. Nevertheless, the general comments under SBC are applicable here. Most quantity surveyors will want the contractor to be present in order to substantiate the measure. A contractor who was not notified or allowed to be present during measurement would be able to argue that the reason for its exclusion was that the measurement was not correct.

### *Function of quantity surveyor*

Neither IC nor ICD envisage that a quantity surveyor will be appointed as a matter of course. Article 4 makes provision for such appointment and the contract refers to the quantity surveyor in clause 5.2 but, if bills of quantities are not included in the contract documents, a quantity surveyor may not be appointed and the function may be exercised by the architect. Indeed a footnote to article 4 expressly states that if the architect is to exercise the functions of the quantity surveyor, the architect's name should be entered in article 4. Few architects have a quantity surveying qualification and an architect intending to exercise this function should make sure that appropriate professional indemnity insurance is in place to cover the risk.

## *14.7 JCT Minor Works Building Contract (MW and MWD)*

### 14.7.1 General

For simplicity, the position has been considered under MWD. It is identical to MW except for the addition of clauses and other references to the contractor's designed portion. Clauses 3.6 and 3.7 under MWD is much shorter than valuation clauses under SBC, IC or ICD. Significant features are indicated below.

### 14.7.2 Instructions requiring variations

The architect's power to issue written instructions is contained in clause 3.4 which gives the architect general power to issue instructions. The contractor's duty is to comply with any such instructions forthwith. Oral instructions must be confirmed by the architect within two days. There is no provision for the contractor to confirm oral instructions. Therefore, if the contractor is given an oral instruction which is not confirmed, the contractor should not try to confirm it in writing. Instead, it should simply notify the architect that, under the provisions of clause 3.4, it is not a formal instruction with which the contractor need comply until confirmed by the architect in writing. The variations provisions in MWD clause 3.6, like all the other provisions, are very brief. Essentially, it empowers the architect to order:

- an addition to the Works
- an omission from the Works
- a change in the Works
- a change in the order in which the Works are to be carried out
- a change in the period in which the Works are to be carried out
- a change in the Employer's Requirements necessitating a change in the design of the CDP work (ICD only).

Clause 3.7 places a duty on the architect to issue instructions regarding the expenditure of provisional sums. Under ICD clause 3.4.2, the contractor has the right to reasonably withhold consent to the issue of an instruction by the architect which affects the design of the CDP work. What may be considered reasonable will depend on all the circumstances. In practice, it is likely that the occasions when such objections may be considered reasonable will be rare, because the effect of most, and probably all, instructions can be dealt with adequately by valuation.

### 14.7.3 Valuation

The architect is charged with valuing all the types of variation noted in the clause. Former editions of this contract made provision for the name of a quantity surveyor to be inserted in the fourth recital even though there are no duties expressly

allocated to a quantity surveyor. If the name of a quantity surveyor was not inserted, the employer would not have any implied authority to appoint a quantity surveyor and in any event it remains the architect's duty to value.[32] ICD no longer makes such provision. The architect, of course, like everyone else, can take whatever advice, from whomever appears appropriate. It is not unusual for a quantity surveyor to be appointed to assist the architect to carry out valuations and to give other cost advice, but the wording of the valuation clause makes clear that it is the architect who is responsible for valuation. This means that, even an architect who seeks advice on the valuation must understand precisely how the valuation has been carried out and it will be no defence later to say that the architect simply adopted the quantity surveyor's valuation, however eminent the quantity surveyor may be.

Clause 3.6.2 requires the architect and the contractor to endeavour to agree a price before the contractor carries out the instruction. Indeed is clear that, to be effective, the price must be agreed before the contractor complies with the instruction. If the price is not agreed, valuation must be carried out in accordance with clause 3.6.3.

In carrying out the valuation, the architect must use, where relevant, the prices in the priced specification or the priced work schedules or the contractor's own schedule of rates. Unlike the position under IC and ICD, the contractor's own schedule of rates is a contract document. However, the criticisms of using a schedule of rates under IC and ICD are applicable to these contracts also. The valuation must be done on a fair and reasonable basis, which gives the architect scope for the exercise of discretion. It is for the architect to decide whether the prices in the contract documents are relevant. It seems, therefore, that unless the work to be valued is exactly the same and carried out under the same conditions, the architect is free to ignore the prices in the priced document. This is because a very slight change in the conditions under which work is carried out or in the character of the work may have a major impact on the contractor's costs.

An important point is that the valuation must include any direct loss and/or expense incurred by the contractor due to regular progress of the Works being affected by compliance with the variation instruction. The previous edition of this form (MW 98) also made provision for loss and/or expense to be included as a result of compliance or non-compliance by the employer with the CDM Regulations. That has now been omitted.

There is no express requirement that the contractor must submit documentary evidence to help the architect carry out the valuation. No doubt many contractors will do that as a matter of course in any event. The valuation must include allowance for profit, overheads and so on, as usual. A fair and reasonable valuation must include the effect of the instruction on other work not expressly included in the instruction.

Clause 3.7 very simply allows the architect to issue instructions regarding the expenditure of provisional sums. The architect must omit the sum and value the instruction in accordance with the principles in clause 3.6. It is possible to use the provision to nominate a sub-contractor, but it is not particularly wise.

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[32] *Beattie v Gilroy* (1882) 20 Sc LR 162.

## *14.8 JCT Design and Build Contract (DB)*

### 14.8.1 General

It will be noted that the wording of clause 5 is very similar to, although shorter than, that of clause 5 in SBC. In administrative terms, however, there is a significant difference – the lack of an independent administrator and certifier. Effectively, in this form of contract the employer and contractor stand facing each other without the benefit of an intervening architect. The employer's agent is exactly that: an agent of the employer and it is probable that the agent owes no duty to the employer to act fairly between the parties. The notices issued by the employer's agent do not have the status of the certificate of an independent architect.[33] It seems, however, that the agent must demonstrate a very high duty of good faith.[34]

The control documents for the contract Works generally which are in place of the contract drawings and the contract bills are the Employer's Requirements and the Contractor's Proposals. A question which often arises is which takes precedence, if there is a discrepancy between the Employer's Requirements and the Contractor's Proposals? It is sometimes argued that the employer *accepts* the Contractor's Proposals and that forms the contract and, therefore, the Contractor's Proposals take precedence. That is to view the formation of the contract as a simple matter of offer and acceptance. Although, no doubt, much negotiation may take place, the formation of the contract occurs when the contract documents are executed by both parties. Essentially, those documents consist of the printed form DB, the Employer's Requirements, the Contractor's Proposals and the Contract Sum analysis.

The whole philosophy of this contract is that the contractor is charged with satisfying the Employer's Requirements. The Employer's Requirements clearly must be the principal document. Clause 2.2 of the contract makes it the prime determinant of the kind and standard of materials and workmanship and only if it does not indicate workmanship or materials does the contractor turn to the Contractor's Proposals. Under clause 5, a 'Change' can refer only to a change in the Employer's Requirements and the employer must instruct the expenditure of a provisional sum under clause 3.11 only if it is in the Employer's Requirements. Reference is sometimes made to the third recital which, it is argued, suggests that the employer accepts the Contractor's Proposals. A close reading of the clause indicates that it is of little practical or legal effect. It is a principle of construction of contracts that if words in the main part of the contract are ambiguous, one may turn to the recitals to discover the true meaning of the words. But if the words in the main part of the contract are clear, the recitals cannot change them.[35] In the case of DB, the words in clauses 2.2, 3.11 and 5.1 are unambiguous. In any event, the third recital simply records the employer's general satisfaction with the Contractor's Proposals. The employer, even if in receipt of professional advice, cannot be expected to check the Contractor's Proposals in detail.

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[33] *J F Finnegan Ltd v Ford Seller Morris Developments Ltd* (1991) 53 BLR 38.
[34] *Balfour Beatty Civil Engineering Ltd v Docklands Light Railway Ltd* (1996) 78 BLR 42.
[35] *Leggott v Barrett* (1880) Ch D 306; *Royal Insurance Co Ltd v G & S Assured Investments Co Ltd* [1972] 1 Lloyd's Rep 267.

Any approval or acceptance which the employer gives must be understood in that context.[36]

For obvious reasons, there is no provision equivalent to SBC clause 5.4 which gives the contractor the right to be present at measurement.

### 14.8.2 Definition

The term 'Change' is used instead of 'Variation'. The definition of a change is virtually identical to the definition of a variation in SBC clause 5.1 except in one very important particular. It does not refer to the alteration or modification of the design, quality or quantity of the Works, but to a change in the Employer's Requirements which makes those things necessary. This is absolutely fundamental to this contract. The employer has no power to directly alter the design of the Works. That cannot be emphasised too much. The employer can only alter the requirements on which the contractor has based its design. The contractor is free to respond to that change in any way it wishes and there is no provision for the employer to be consulted other than when construction drawings are to be submitted. For example, if the employer requires an auditorium to be capable of seating 1,500 instead of 1,000 people, the contractor may satisfy that change, if not precluded by some other requirement, by making the auditorium longer, wider, a combination of the two or by introducing a gallery.

### 14.8.3 Instructions requiring changes

The employer's power to issue instructions is contained in clauses 3.5–3.15. The power to instruct changes is in clause 3.9. Where an architect is employed as employer's agent, it is still common for a change instruction to be issued in the form of a detailed drawing showing the precise alteration to the design which the architect believes will satisfy the employer's changed requirements. In such circumstances, the contractor may not even be given details of such changed requirements. The employer's agent appears to have no power to issue instructions in that form and the contractor may refuse to comply. Alternatively, the contractor may choose to consider the drawing to be the employer's changed requirements in particularly detailed form. It is probable that the responsibility for such design rests with the employer, because the instruction is technically an instruction to change the Employer's Requirements and, by clause 2.12, the contractor has no responsibility for verifying the adequacy of any design in the Employer's Requirements.

In any event there is an important restriction on the employer's power to require changes. Clause 3.9.1 states that the employer cannot instruct the contractor to carry out a change requiring an alteration or modification in the design without the consent of the contractor. Although the contractor cannot withhold or delay its consent unreasonably, it still leaves plenty of scope for the contractor to refuse

[36] *Hampshire County Council v Stanley Hugh Leach Ltd* (1991) 8-CLD-07-12.

consent if it wishes. This provision is entirely consistent with the philosophy of the form which assumes that the employer has set out all its requirements when inviting tenders and that the employer is generally satisfied with the contractor's response as embodied in the Contractor's Proposals. Changes must be possible, but they are not encouraged.

The word 'design' of course does not simply mean the drawings, but also the written part of the Contractor's Proposals such as specifications and schedules of work.[37] Every change will involve an amendment to some item in one of these documents. This clause, therefore, effectively gives the contractor the right of veto over any change if it cares to use it. The contractor has the right under clause 3.5 to make reasonable objection to instructions varying the obligations and restrictions under clause 5.1.2.

Clause 2.9, with admirable brevity, states that the employer must define the boundaries of the site. The employer has no power to change the definition once it is made, but clause 2.10.1 makes clear that if there is a divergence between the definition and the Employer's Requirements, the employer must issue an instruction to correct it. The instruction is then deemed to be change under clause 5.1 for the purposes of adjustment to the contract sum.

Clause 2.10.2 states that if the employer or the contractor finds a divergence, either must give the other a written notice. It may be argued, therefore, that if the contractor fails to spot a divergence and fails to give notice, it will be unable to recover any resultant expense incurred in correcting the divergence. However, it is clear from the wording of the clause that the contractor has no obligation to look for or find divergences, merely to give notice if it finds any.[38] In this instance, the contractor's obligation is expressly the same as that of the employer. A better view is that it is for the employer to provide a correct definition.

### 14.8.4 Valuation

#### *Valuation method*

There is no provision in this contract for the valuation of changes by a quantity surveyor. Under clause 4.9, it is for the contractor to submit interim applications for payment and, under clause 4.12 it is for the contractor to submit its final account and final statement at the end of the project setting out the valuation of changes in accordance with the rules set out in clause 5. Valuation in the first instance is carried out by the contractor, but the contractor must carry out the valuations strictly in accordance with the rules set out in clause 5. The provision for valuation of changes by agreement instead of by the strict rules set out in clause 5.2 remains as in clause 5.2 of SBC. Prior agreement between employer and contractor regarding the valuation of changes is strongly recommended.[39]

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[37] *John Mowlem & Co Ltd v British Insulated Callenders Pension Trust Ltd* (1977) 3 Con LR 63.
[38] *London Borough of Merton v Stanley Hugh Leach Ltd* (1985) 32 BLR 51.
[39] But see the provisions of supplemental provision 4 in Section 14.8.5 below.

***Valuation rules***

The control document for valuation of changes is the Contract Sum Analysis. This is a document which forms part of the contract documents. It is referred to in the second recital and in the Contract Particulars where there is provision for the identification of the documents which comprise it. No practice note has been issued by JCT specifically for DB at the time of writing, but JCT Practice Note CD/1B (originally issued for CD 81) contains valuable notes about the Contract Sum Analysis and anyone embarking upon a contract under this form, whether as employer, contractor or as advisor to either, would be well advised to read it carefully.

The rules for valuation of changes are contained in clauses 5.4–5.7. They are strikingly different from the rules in SBC, IC or ICD. The first consideration is that valuations must include allowance for the addition or omission of relevant design work. It appears that only design work related to a variation can be valued. This emphasises the importance, not only of making sure that there is a clear rate for design work in the Contract Sum Analysis but also that there is a variation with which the design work can be associated. The contractor should be on its guard against carrying out design work for changes which may be aborted. The contractor may be unable to claim the cost of such work, because it will not be 'relevant' or connected to any change.

The second rule is contained in clause 5.4.2. Although it similar in general approach to the basic rules in SBC, IC and ICD, there is a striking difference. The clause states that the valuation of additional or substituted work must be consistent with work of similar character in the Contract Sum Analysis. Allowance must be made for change in conditions and significant changes in quantity and if there is no work of similar character a fair valuation must be made.

The comments about the similar rules in SBC are relevant here. However, it should be noted that the valuation must be 'consistent' with work of similar character whereas in SBC, IC and ICD, the rates and prices for work of similar character must 'determine' the valuation. The word 'consistent' was used in the valuation rules under IFC 98, but the latest edition of the Intermediate Building Contract (IC and ICD) replace 'consistent' with 'determine' as under SBC and JCT 98 before it. Therefore, the problem of interpretation is simply the meaning to be given when a valuation is to be consistent with certain rates rather than a valuation where the rates determine the valuation.

The words in question have no particular meaning confined to the construction industry and their ordinary English meanings must be used. Therefore, where it is said that rates and prices must determine a valuation, it is clear that the valuation must be carried out strictly in accordance with the rates and prices and that there is no room for adjustment. However, where it is said that a valuation must be consistent with rates and prices, it means that the valuation must not conflict with[40] the rates and prices which leaves scope for interpretation of the rates and prices and the way in which they are to be applied. It is by no means clear why it is thought appropriate to allow this flexibility in the valuation which, at least in the first instance, must be

[40] *The Concise Oxford Dictionary*.

carried out by the contractor, while imposing strict conformity where a quantity surveyor's valuation is concerned.

Clause 5.4.3 refers to the valuation of omissions and requires the values in the Contract Sum Analysis to be used. Clause 5.4.4 requires that an allowance must be made for changes in site administration, site facilities and temporary works.

### *Valuation of provisional sums*

The employer may include provisional sums in the Employer's Requirements to cover works for which the contractor is not required to make proposals at tender stage. This may be because it is not practicable to do so or because the employer wishes to keep control of some significant part of the work or for some other reason. The issue of instructions regarding the expenditure of such sums is an obligation. It should be noted that there is no provision for the inclusion of provisional sums in the Contractor's Proposals and any such sum must be transferred to the Employer's Requirements before the contract is executed or the employer will be powerless to deal with them and it is arguable that the contractor will be entitled to payment of the sum without carrying out the relevant work.

### *Valuation on a daywork basis*

The provision for valuation of changes by daywork where valuation by measurement is not reasonably practicable is identical to that in SBC and the comments under that contract are applicable. The relevant percentage additions to prime cost must be set out in the Contract Sum Analysis.

### *Valuation if there are Bills of Quantities*

Perhaps surprisingly, where supplemental provision 3 in schedule 2 is stated in the Contract Particulars to apply, it makes provision for the Works to be described in the Employer's Requirements by means of bills of quantities. Since the whole idea of a design and build contract is that the contractor not only takes responsibility for building, but also for completing the design (clause 2.1.1), the scope for describing the Works by means of a bill of quantities might normally be expected to be small, since the bill cannot, or at any rate should not, be prepared until the design is completed. However, it does sometimes happen that the employer requires a virtually complete building design before seeking tenders. This may be partly explained by the current prevalence of 'novation' or 'consultant switch' of the design team[41].

The dangers to the employer of having most of the design completed before tendering were thought to have been lessened following the recent decision dealing with the similar wording in the JCT Designed Portion Supplement which held that

[41] These practices and other aspects of DB are considered in David Chappell *The JCT Design and Build Contract 2005* (2007) 3rd edition Blackwell Publishing.

the contractor's obligation to complete the design required it to check the adequacy of the preliminary design of others.[42] However, whatever may have been the effect of that judgment on WCD 98, DB clause 2.11 has been expressly introduced to overcome the effect of the judgment and provides that the contractor is not responsible for whatever is in the Employer's Requirements or for verifying any design. Therefore it seems that there can be no advantage to the employer in having the whole of the design carried out and bills of quantities prepared under DB. The result would be broadly that the contractor would be undertaking a design and build contract where its liability for design was almost wholly extinguished. If, for whatever reason, full bills of quantities are used, provision 3 sets out the following stipulations:

- The Employer's Requirements must state the applicable method of measurement.
- Errors in description or quantity must be corrected and treated as a change in the Employer's Requirements.
- Clause 5.4 valuations must use rates and prices in the bills of quantities instead of those in the Contract Sum Analysis.
- Fluctuation option C must be amended to refer to the bills of quantities instead of the Contract Sum Analysis and an amendment made in paragraph 2.

The net result of using provision 3, bills of quantities, appears to be to place the financial responsibility for errors firmly on the employer.

### 14.8.5 Supplemental provision 4

Clauses 2.23–2.26, 4.20–4.23 and clause 5 are modified, but not superseded, by this provision. If supplemental provision 4 is stated in the Contract Particulars to apply, the contractor will be expected to operate these provisions without prompting. It is very easy to overlook the supplemental provisions.

The procedure is triggered when the employer issues an instruction under clause 3.9. If either the employer or the contractor is of the view that the instruction will involve either valuation or extension of time or loss and/or expense, the contractor must submit certain estimates (noted below) within a particular timescale. The timescale is 14 days from the date of the instruction or within any period agreed or, if no agreement, within such period as may be reasonable in all the circumstances. On the face of it, there is an obvious problem, because the clause calls for the contractor to act on the basis of an opinion which may be held by the employer alone and which the contract provides no mechanism for transmitting to the contractor. Thus if the employer believes that an instruction issued will give rise to an extension of time, but which the contractor thinks will have no effect, the contractor is obliged to submit estimates within the prescribed period although the employer may not have communicated this opinion. This drafting flaw, which was present in WCD 98, is made tolerable only by the fact that, in practice, it will be rare that a contractor does not believe an instruction will result in valuation, extension of time or loss and/

[42] *Co-operative Insurance Society Ltd v Henry Boot Scotland Ltd*, 1 July 2002, unreported on this point.

or expense and even rarer that this lack of belief will be countered by the opposite belief on the part of the employer.

A similar clause (referred to as 'clause 13.8') was considered in the Scottish case *City Inn Ltd v Shepherd Construction Ltd*.[43] There, as in this instance, there were consequences if the contractor failed to operate the provisions of the clause. There it was loss of entitlement to extension of time under clause 13.8.5; here it is loss of entitlement to early payment and to interest or finance charges. The contractor contended that the clause imposed no obligation on it to address its mind to whether the instruction would have the contemplated effects and, therefore, the contractor could not be said to have failed to comply unless it had formed an opinion that the instruction would have those effects, but had not acted accordingly. Lord MacFadyen dismissed this approach:

> 'I am therefore of the opinion that on a sound construction of Clause 13.8.1 the contractor, on receipt of an architect's instruction, was obliged to consider whether it would require adjustment of the contract sum and/or an extension of time, so as to place himself in a position (if he formed the opinion that it would have that effect) to comply with his obligations to defer executing the instruction and to provide the requisite details to the architect. The wording of the clause is, it seems to me, less than perfect. It does not expressly address the eventuality of the contractor reasonably and in good faith forming the opinion that the contemplated consequences will not follow from the instruction, and consequently not doing what Clause 13.8.21 required, and the need for an extension of time later becoming evident. It is unnecessary, however, for the purposes of this case to decide whether in that event the contractor would have lost his entitlement to an extension of time.'[44]

The question left unanswered by the court in this instance is important. Would the contractor lose entitlement to early payment and to interest or financing charges if it had formed the opinion that the instruction had no consequences, but subsequently that opinion was found to be a wrong conclusion? In such circumstances, it is thought that, upon the contractor making that contention, the burden of proof would switch to the employer to show that no reasonably competent contractor could have formed such an initial conclusion.

The way the provision works is that after every instruction, the contractor considers whether it can produce the necessary estimates within 14 days and, if not, the contractor suggests a longer period. If the employer disagrees, the contractor prepares estimates within a period which is reasonable in all the circumstances and, if the employer feels strongly or, more likely, if the extra time in producing estimates has caused some delay, the employer may, of course, refer the matter to one of the dispute resolution procedures.

The provision makes clear that the employer may state that estimates are not to be submitted. The employer may do this either with the instruction or, rather

[43] [2002] ScotCS 187. The case went to appeal to the Scottish Court of Session [2003] BLR 468 but the original decision was upheld and subsequently approved in the Outer House of the Court of Session [2007] CSOH 190.
[44] *City Inn Ltd v Shepherd Construction Ltd*, [2002] ScotCS 187, at paragraph 23.

bizarrely, within 14 days, therefore conceivably on the thirteenth day just before, or after, the contractor submits estimates. Whether the draughtsman has considered this possibility is not clear. In such circumstances, the contractor should be reimbursed for its costs and it is thought that such reimbursement would not be restricted to payment for necessary design work as is the case under provision 4.5 if the employer withdraws the instruction. In this instance, reimbursement would be part of the valuation of the instruction under clause 5. The contractor may raise reasonable objections to the provision of estimates, either for itself or on behalf of a sub-contractor, within 10 days of the issue of an instruction.

Provision 4.3 provides that the estimates replace valuation under clause 5.2 and ascertainment under clause 4.20. The estimates required are:

- the value of the instruction with supporting calculations referrable to the Contract Sum Analysis
- any additional resources required
- a method statement
- any extension of time and consequent change to the completion date
- the direct loss and/or expense, not included in any other estimate.

Provision 4.4 refers, perhaps optimistically, to the employer and contractor taking all reasonable steps to agree the estimates. If they are successful, the estimates are binding on both parties. Therefore, even if subsequently it is found that the contractor's estimate is wildly wrong, both parties are bound by it. Surprisingly, there is no procedure to record so important an agreement. A brief document setting out the instruction and (possibly revised) estimates with two signatures and the date would appear to be the very minimum requirement if subsequent disputes are to be avoided.

If agreement is not reached within ten days of receipt of estimates on, effectively, all matters, the employer may do one of two things:

- instruct compliance with the instruction and that provision 4 will not apply, thereby reverting to clauses 2.23–2.26, 4.20–4.23 and clause 5 in full; or
- withdraw the instruction.

Withdrawal of the instruction is not to cost the employer anything other than additional design work which the contractor undertook purely and necessarily to prepare its estimates and for no other reason. Such design work is to be treated as if it were the result of a change instruction.

There is a sting in the tail of this clause. If the contractor does not comply with provision 4.2 and fails to submit estimates or to make reasonable objection, provision 4.6 states that clauses 2.23–2.26, 4.20–4.23 and clause 5 will be applicable, but that any resultant addition to the contract sum will not be included in interim payments, and must wait until the final account and final statement. Moreover, the contractor will not be entitled to any loss of interest or any financing charges for the intervening period. The contractor's obligation to form an opinion has been considered above. The wording of the clause does not preclude any deduction from the contract sum being taken into account in interim payments.

## *14.9 JCT Prime Cost Building Contract (PCC)*

### 14.9.1 Commentary

Since all the work carried out under this kind of contract is uncertain, the architect must issue instructions under clause 3.14 for *all* the work required to be carried out even if it is already shown on drawings and specifications. Clause 3.15 empowers the architect to issue instructions requiring changes (variations) in the Works. They are defined in very much the same terms as variations under SBC clause 5.1 and the comments there are generally applicable here also. There is no express provision for the valuation of changes. That is because payment for the whole of the Works is calculated under clause 4. 'The Works' is defined in clause 1.1 as the works described in the first recital and the contract documents including any changes. Therefore, in calculating payment for the Works, payment for any properly instructed changes are also included. The contractor is entitled to be paid the prime cost and the contract fee which are defined in considerable detail in schedules 1 and 2 respectively.

Clause 3.10 entitles the contractor to refuse to comply with an architect's instruction in two specific situations. The first is similar to clause 3.10.1 of SBC. It covers instructions imposing obligations or restrictions on access or use of the site, working space, hours or sequence of work or changes to any such obligations or restrictions which are already in the specification. The second, clause 3.10.2 deals with any situation where the architect issues an instruction which alters the scope of the Works as stated in the specification, contract drawings and any other documents which are so identified in the Contract Particulars. The contractor is only entitled to refuse to comply to the extent that, a) it makes reasonable objection in writing as soon as reasonably practicable or b) that it makes application in writing for a revision of the contract fee. A reasonable objection might be an instruction restricting the contactor's use of the site which might seriously hinder the progress of the Works.

The second part of the clause gives the contractor the power to apply to the employer with a copy to the architect requesting a revision to the contract fee. There is nothing remarkable about that, because there is nothing to prevent the contractor from applying to the employer about anything at all at any time. However, the purpose of this clause is to overcome a situation which would ordinarily allow the contractor to refuse performance of the instruction or treat it as a separate contract for which it could either negotiate its own terms or receive reasonable remuneration. Under this clause, the contractor must apply within 14 days of the issue of the instruction in question. Paragraph 1.1 of schedule 2 addresses instructions which alter the scope of the Works. Although the application is made to the employer, it is the architect who is charged with considering whether it is fair and reasonable to revise the fee. If the architect does consider a revision to be fair and reasonable and the employer, presumably after receiving the architect's decision, confirms it to the contractor, the architect makes an appropriate revision to the fee and decides the date from which it applies. The architect may delegate this task to the quantity surveyor. It should be noted that the architect is to have a 'consultation' with the contractor; there is no requirement for agreement. Since 'to consult' merely means to seek advice or information, the contractor is in no position to influence the outcome.

## 14.10 JCT Management Building Contract (MC)

### 14.10.1 Commentary

Instructions are dealt with in a rather similar way to SBC. Clause 3.9. The management contractor must comply or secure compliance by the works contractors with all empowered instructions issued by the architect. Clause 3.13 provides that the architect may issue instructions which require project changes or works contract variations. Clause 3.15 places a duty on the architect to issue instructions about the expenditure of provisional sums in the works contracts (MCWC/C).

The definition of project change contained in clause 1.1 is very wide. It refers to the alteration or modification of the scope of the project as set out in the project drawings and specification. This definition gives the architect tremendous scope to change the project. In particular, it goes beyond the usual understanding of the architect's power to issue variations. It is difficult to say precisely where the architect's power to change the project ends and one is driven to the conclusion that the overriding consideration may simply be that the project remains capable of description by the entry in the first recital. The definition of works contract variation is in similar terms to the definition of variation found in SBC clause 5.1, but it is defined in the general definitions clause 1.1, no doubt, because there is no variations clause in MC to deal with it.

The valuation of variations is dealt with in MCWC/C, but there is no provision to value project changes in MC. The rationale is presumably that project changes will be reflected either in the individual works packages or in the works contract variations. Although the architect may give instructions about the expenditure of provisional sums in MCWC/C, such sums are not defined.Clause 3.9 provides that the management contractor need not secure compliance with an instruction to vary the works contract if the works contractor has made a reasonable objection under clause 3.5 of MCWC/C. The purpose of the second part of clause 3.13 is not entirely clear. It records that if the works contractor has not disagreed with an instruction being dealt with under the variation quotation procedures of MCWC/C within the stipulated time (four days or other agreed time from receipt of the management contractor's direction), the management contractor must ensure that the procedure is carried out. Valuation of works contract variations is carried out by the quantity surveyor under clause 5 of MCWC/C which closely resemblances SBC clause 5 and the comments under that clause are generally applicable here also.

## 14.11 JCT Construction Management Trade Contract (CM/TC)

### 14.11.1 Commentary

The construction management form is significantly different from the management contract (MC). In the case of MC, the management contract (MC) is the contract between employer and contractor. The MCWC/C governs the relationship between management contractor and works contractor which is sub-contractual. Under

construction management, however, the trade contractor contracts directly with the client under the trade contract (CM/TC). The construction manager is also contracted directly with the client, but more like an organising and administrating consultant and certainly with substantial differences from a management contractor.

In general terms, the variation clause (5) is very similar to the equivalent clause in SBC. The definition of 'variation' is almost identical to the definition in SBC. If article 2B applies, however, the definition is modified to omit reference to 'quantity' of the Works. This is because article 2.2 is used where complete re-measurement of the Works is required. It is the construction manager, not the architect who may issue instructions requiring a variation. Instructions requiring a variation are to be issued under clause 3.12 and the trade contractor has the usual rights of objection under clause 3.8, including the right to object to an instruction requiring a variation which in the trade contractor's opinion adversely affects the design of the trade contractor's designed portion. The trade contractor must specify the adverse effect on design within seven days of receiving the instruction and the instruction is thereby deprived of any effect until such time as the construction manger confirms it. It seems that, on confirmation, the trade contractor must carry out the instruction and it matters not whether the objection was reasonable. Valuation is to be in accordance with clauses 5.6–5.12 unless the construction manager and the trade contractor agree a price or the variation instruction is the subject of a confirmed agreement.

The construction manager may sanction variations which the trade contractor has made without instruction and there is the usual, unnecessary proviso that no instruction issued or sanctions given by the construction manager will vitiate the trade contract.

Clause 5.3 provides for the trade contractor to provide, if requested, a variation quotation in accordance with part 2 of schedule 2 on very similar terms to SBC. Clause 3.14 provides that the construction manager must issue instructions regarding the expenditure of provisional sums.

## *14.12 JCT Major Project Construction Contract (MP)*

### 14.12.1 Commentary

Three clauses deal with what this contract refers to as 'Changes', but which are more commonly known as variations. The clauses are 19 (acceleration), 25 (cost savings and value improvements) and 26 (changes). Clause 26 is the main variation clause and the one under consideration here.

There is just one method of valuing changes: by fair valuation. But there are two ways of setting about it. The first is if the employer under clause 26.3 provides the contractor with details of the change before issuing an instruction and asks the contractor to submit a quotation. The contractor has 14 days to do so unless the employer has stated a longer period in the request. Clause 26.4 states that the quotation must value the change in accordance with the principles in clause 26.6. A slight ambiguity is present here, because clause 26.6 refers to making a fair valuation. It provides that the valuation must have regard to a set of principles. To 'have regard'

to something is quite different from calculating in accordance with something. To 'have regard' has the sense that notice must be taken and the principles must be read and considered. However, having read and considered the principles, they need not be strictly observed.

The quotation must also identify any adjustment to the completion date, it must be in enough detail so that the employer can carry out an assessment of amounts and periods, loss and/or expense should be stated separately and, finally, the quotation must state the period of not less than 14 days when it will remain open for acceptance. Unlike the position under the general law when a tender, stated to be open for a period, can be withdrawn without notice at any time if no consideration has been given for keeping it open, once a period has been stated under clause 26.4.4, the quotation cannot be withdrawn, because the procedure of stating a period is part of the contract for which both parties have already provided ample consideration.

Having received the quotation, the employer, under clause 26.5, may either accept it or request a revised quotation. Evidently, no reasons need be given for requesting a revised quotation, but the contractor can probably refuse to provide it. It is clear from clause 26.3 that, on the initial request for a quotation, the contractor must provide it. However, it is certainly arguable that it does not apply to a request for a revised quotation. If the contractor was not able to refuse, there seems to be no end to the number of revised quotations it could be asked to provide.

To signify acceptance, the employer must issue an instruction noting the quotation, the amount and the adjustment to the completion date (if any). If there is no acceptance, it is for the employer to make a fair valuation under clause 26.6. On this occasion the valuation is not to be made in accordance with the principles, but the lesser obligation of having regard to them. The principles are the nature and timing of the change, its effect on other parts of the project, prices and principles in the pricing documents, but only to the extent that they are applicable, and any loss and/or expense resulting from the change. However, no loss and/or expense of any kind can be included if anything other than a change contributed to it, because in that case, it will be dealt with under clause 27.[45]

Clauses 26.7 and 26.8 deal with the situation which arises if the change is instructed without any request for a quotation. In that instance the contractor has 14 days from the date that either party identified the change in which to give the employer details of the contractor's proposal to value the change with supporting information to permit a fair valuation. Use of the word 'identified' is curious. No doubt in most cases a pre-instruction quotation will be requested. Presumably, the contract is attempting to give the contractor the opportunity of submitting a valuation, not only after receipt of an instruction (one way of identifying a change?), but also if it is of the view that a change has occurred in some other way.

The contract is silent about the position if the contractor fails to produce proposals within 14 days. Is any valuation after that date invalid or simply a late valuation? It is thought that it would require clear words before a failure on the part of the contractor to submit a valuation within the prescribed 14 days would invalidate or prevent any future valuation of the change. The 14 day requirement would have to be a condition precedent to a failure to prevent a valuation from being carried out.

[45] See Chapter 13, Section 13.8.

It is likely that the contractor would not be precluded from providing a late valuation provided that it is submitted in time to be included in the final payment advice under clause 28.6.[46] It is not easy to precisely identify that date despite clause 26.9.

After receipt of the contractor's valuation, the employer has a further 14 days in which to carry out its own valuation. Again the contract is silent about whether the employer can make a valuation if the contractor does not produce its valuation within the original 14 days or indeed whether the employer's late valuation would be valid. Presumably, business efficacy would require the employer to proceed to make a valuation even if late. Assuming the employer's valuation proposal is produced in due time, it must be in sufficient detail to allow the contractor to be able to note the differences. It is likely that, in the absence of a valuation by the contractor within the 14 days, the employer would have the right and probably the duty to proceed to value the change.

Clause 26.9 is a review clause. Its purpose appears to be to set a timetable for the final consideration of change valuations. The contractor has 42 days from practical completion in which to give particulars to the employer if the contractor considers that a change should have some additional value. The employer has a further 42 days in which to review previous valuation of the changes notified by the contractor and to notify the contractor of any further valuation considered appropriate. It is arguable whether or not these deadlines are mandatory so as to deprive the contractor of the valuation of changes which are objectively due.

Although there are one or two loose ends, this clause is relatively simple to understand, but it may be somewhat woolly in application.

## *14.13 JCT Measured Term Contract (MTC)*

### 14.13.1 Definition

Variations are defined in clause 5.1. Variations relate to variation to the work contained in any order issued by the contract administrator and comprise alterations to or modifications of design quality or quantity of the work, any omission and the removal of inconsistencies. It should be noted that there is no provision for variations in restriction on access, hours of work and the like as occurs in SBC.

### 14.13.2 Instructions requiring variations

Clause 3.5.1 empowers the contract administrator to instruct variations. The instructions must be in writing and unusually clause 3.5.1 specifies that the issue of further drawings, details, directions[47] or explanations rank as variations. Although no doubt the intention was to make the situation clear, the inclusion of a set of other actions

[46] *Cantrell and Another v Wright & Fuller Ltd* (2003) 91 Con LR 97.
[47] See Section 14.5.3 for a discussion on the meaning of 'direction'.

which will result in variations, but which are apparently not to be considered as instructions, merely serves to muddy the water. Clause 5.2 stipulates that the contractor must not vary the work in an order except as required in writing under clause 5.1, but the contract administrator has the power to sanction uninstructed work. Clause 3.5.4 requires that soon as the value of a variation is ascertained, it must be included in the estimated value of the order for the purpose of interim and final payments.

### 14.13.3 Valuation

The provisions for valuation are fairly standard, but with some interesting features. Clause 5.2 states that the contract administrator and the contractor may agree the valuation of any order including variations to that order. Otherwise valuation must take place in accordance with clauses 5.3–5.8. However, the clause then proceeds to state that the valuation is to be undertaken, not automatically by the contract administrator, but by whoever is designated in the contract particulars. The contract particulars provide three options, one of which must be chosen. One option permits the contract administrator to value all orders; another option permits the contractor to value all orders. Predictably, the third option is for the contract administrator to value orders at or above a stipulated estimated value and for the contractor to value all other orders. If no option is chosen, the contract administrator must carry out all valuations.

Clause 5.3 states that the valuation of an order must be carried out by measurement and valuation in accordance with the schedule of rates as adjusted by the adjustment percent, but only to the extent that the rates are applicable. There is no similar provision for using the rates as a basis for valuation where the conditions change as is the case under SBC. It also seems that the same rates apply, irrespective of any change in quantity. However, clause 5.5 deals with rates derived from the schedule of rates. The clause rather baldly states that, if the rates do not apply, the contract administrator is entitled to fairly deduce rates from the schedule of rates. If that is neither practicable nor fair and reasonable, the value may be agreed between the parties (i.e. between contractor and employer, not the contract administrator), but if that cannot be achieved, the contractor is entitled to calculate the valuation on a fair and reasonable basis. The contractor must be consulted first, but the effect of consultation has already been found to be minimal.[48] The contractor must be given the opportunity to be present during any measurement. Overtime working is covered by clause 5.7 and applies when the contract administrator in an order specifically requires overtime working.

Clause 5.4 provides for measurement at daywork rates if the contract administrator so decides and there is the usual stipulation about delivery of returns (daywork sheets) within seven days.

Clause 5.6 gives details of the circumstances in which the rates are to be revised.

[48] See Chapter 11, Section 11.6.2.

## *14.14 JCT Constructing Excellence Contract (CE)*

### 14.14.1 Commentary

Clause 4.14 requires the supplier to comply with all reasonable instructions of the purchaser which relate to the project. This must include instructions requiring a change to the services or the project, because such instructions are included in clause 5.7 as part of the relief events. There is no particular provision for valuation. Instead, the valuation of changes is made part of the general agreement of the effects of relief events under clause 5.13.[49] In the event of a failure to agree, it seems that the purchaser is empowered to fix any additional cost.

[49] See Chapter 11, Section 11.10.1.