breed and nourish delinquency in general and vandalism in particular; also, about possible ways and means of achieving better landlord/tenant relationships in public sector housing.

The only evidence of cost – which, after all, was the subject of the Symposium – was offered by Donald Ritson, Assistant General Manager, Milton Keynes Corporation. On the basis of an inconclusive survey, he indicated that one New Town had spent £25/30,000 on making good vandalised loss/damage in one year; another had spent £36,000 before and £9,500 after the occupation of particular dwellings. Even so, the incidence of such loss/damage in new towns appears to be lower than in other situations.

Edward Hollamby, OBE, Director of Development at Lambeth, concluded that the Seminar had produced no new remedies for the maladies discussed. Could this be due to searching for them in a too-limited field? As another speaker put it: 'vandalism is people' – and several speakers emphasized the need to change the attitudes and behaviour of individuals – mainly by education. But, if Owen Luder, Architect, was correct, this process could take up to three generations to achieve. One attender was left hoping that a future conference, if one is arranged, would include some reference to the philosophical/religious concepts of human nature and examine in greater depth the spiritual needs of human beings.

However, the best summary of the proceedings is perhaps the quotation from a speech on 26th April 1978 by the Prime Minister, the Rt. Hon. James Callaghan, MP, which was printed in the Seminar programme – 'Violence is nothing new. But vandalism, wanton and motiveless destruction of property, is reaching a new scale. The cost is enormous, estimated by the Home Office at tens of millions of pounds a year. It brings not just inconvenience but also real danger to the public; and it creates such ugliness. Streets, parks, houses take on an air of neglect and decay – destroying any pride felt in the neighbourhood and eating away at the soul of the community. Everyone suffers eventually. How important, then, that schools, parents and the communities face up to their responsibilities, together and working with the police, to turn back the tide of crime, to find again the close web of relationships which interdependence and shared problems create in caring communities.'

A. T. G.

CLERKS OF WORKS ON BUILDING PROJECTS LET UNDER THE JCT STANDARD FORMS OF BUILDING CONTRACT

By A. E. Batty, FIQS, FIArb

In common with all other members of the human species, those particular persons called upon to be clerks of works can be good or bad at their job. The virtues attaching to goodness need no commentary. The troubles which come from badness, however, are another matter. This commentary is intended to help in overcoming problems caused in building works by inexperience or genuine badness in a clerk of works. I use the JCT(RIBA) form of contract because it is the most commonly used standard form of building contract. In the event of any other form of contract being used, my comments here should be taken as a general guide, the more important parts of which should be verified by reference to any special clauses dealing with the authority of the clerk of works in the special contract.

No amount of expert knowledge will save a bad builder from the consequence of his imperfections. Nor will it help much if the builder fails to appreciate that a clerk of works is obliged to perform his duties in the exercise of a very necessary job. A builder will gain more benefit by building properly than he will by any knowledge of contractual rights and duties. A builder will gain more benefit by seeking to establish a fair and reasonable relationship with a clerk of works than he will from lecturing the clerk of works about what he may and may not do. However, the key words are "fair and reasonable".

What is fair and resonable always depends upon the circumstances. We cannot expect a second-hand mini to produce the performance characteristics of a brand new Rolls-Royce. That is a familiar illustration in the building industry of precisely the problem caused by a clerk of works who is genuinely unreasonable. To put the problem in proper perspective I now move to contractual considerations . . . but I stress that reasonableness is found only in response to reasonableness. The hard letter of any contract should be used only when genuine reasonableness finds itself flowing down a one-way street.

What powers does a clerk of works enjoy under the contract?

Clause 10 in the JCT(RIBA) contract states that the duties of the clerk of works are . . ."to act solely as inspector on behalf of the Employer under the directions of the Architect/Supervising Officer". That is the full extent of the powers granted to a clerk of works. A builder must recognise the duty to inspect, but must not magnify that duty into something larger, "to act solely as inspector". . . Those are very limiting words, and all good clerks of work will welcome such importance and significance as fall within the limitation. On practically every building project the architect and quantity surveyor nominated by the employer seek to enlarge the duties which a clerk of works must perform. For example; many contract bills will often ask a builder to present daywork records for signature by the clerk of works; thereby seeking to make the clerk of works the architect's "authorised representative" within the meaning of the last paragraph in contract clause 11(4)(c). Such action is a breach of contract clause 10. A good clerk of works is well entitled to tell his architect that valuation of variations by daywork is a matter more properly within the province of the nominated quantity surveyor. A clerk of works is not entitled to verify daywork records, since the contract very clearly states that his duties are "to act solely as inspector on behalf of the employer" and his countersignature to any daywork record is contractually meaningless. His signature is often practically meaningless, as well, if the quantity surveyor decides to ignore any daywork record because a variation is too expensive when valued in that manner!

The illustration regarding dayworks is but one example. There are many others. Some builders treat a clerk of works

as if he is their general foreman or agent on the site. He tells the workmen what to do and when to do it. Some architects treat the clerk of works as their "on-site designer and detailer". Maybe these two latter illustrations are extremes . . . but they demonstrate the range of possible abuses of the simple duty "to act solely as inspector".

How should a clerk of works use his contractual powers? Simply by inspecting the works in progress to satisfy himself that all is well and that the employer is receiving from the builder materials, goods and workmanship of the kinds and standards required by the contract. If the clerk of works is not satisfied, then he should alert the architect to the cause of disatisfaction so that the architect can serve instructions regarding the matter to the builder.

Again, however, care should be taken by all concerned not to enlarge the clerk of works' exercise of his powers. Contract clause 10 is very limiting. A good clerk of works might carefully inspect a major building project lasting many months in construction and never do more than exchange common courtesies with the builder. However, occasion may arise when (for the good of all) the clerk of works thinks it necessary to inform the builder that some aspect of the construction does not comply with the contract. A good clerk of works will act in that way to save wasted effort and wasted expenditure, no matter whose sweat or money is at risk.

If the good clerk of works wishes to communicate his concern about some aspect of the construction works he is entitled to do so by giving the builder "directions". The word "direction" is in marked contrast to the word "instruction". An architect might issue instructions (with the authority of the contract), but a clerk of works is permitted only to give directions. The two should not be treated as if they were one and the same thing. They are totally different. Any builder who acts on an instruction from a clerk of works (or who treats a proper direction as if it were an instruction) does so at his own peril.

Contract clause 10 states that a clerk of works might issue "directions" to the builder. The clause then imposes very strict limitations on the effect of any such directions; as follows:

(*a*) such directions *shall have no effect* unless they are given in regard to a matter in respect of which the *architect* is expressly empowered by the contract to issue *instructions* (see paragraph below for the only matters about which the contract entitles the architect to issue instructions. Again, each person must take care not to enlarge the scope of architectural "instructions" within the meaning of the contract);

(*b*) any properly valid direction from the clerk of works *shall have no effect* unless it is confirmed *in writing by the architect* within two working days of the direction being given.

Those are very definite restrictions. They are meant to protect the employer. He engages an architect to supervise his building project, not a clerk of works. The employer does not want to be placed in the position where he is contractually obliged to pay for variations other than those authorised by his architect. Remember that an employer employs a clerk of works to act solely as an inspector of the works.

The directions any clerk of works is contractually entitled to give to a builder are restricted to the following particular matters which are expressly mentioned in the JCT(RIBA) standard forms of building contract, although common sense restricts him more:

clause 1(2): clarification of discrepancies and divergencies found in the contract documents;

clause 4(1): removal of divergence between requirements of the contract documents and any statutory obligation;

clause 5: liability for cost of errors in setting out;

clause 6(3): opening up concealed work for inspection, or the carrying out of tests on materials or goods;

clause 6(4): removal of any work, materials or goods which are not in accordance with the contract;

clause 6(5): reasonable and non-vexatious requirements for the dismissal from the works of any person employed thereon;

clause 11(1): variations requiring the alteration or modification of the design, quality or quantity of the works;

clause 11(3): the expenditure of prime cost and provisional sums;

clause 11(6): requiring the nominated quantity surveyor to ascertain loss and expense suffered by the builder and caused by variations;

clause 15(2): liability for cost of defects, shrinkages and faults appearing within the Defects Liability Period;

clause 15(3): requiring the making good of defects, shrinkages and faults due to materials or workmanship not in accordance with the contract or to frost occurring before practical completion of the works; and liability for the cost of such making good;

clause 20(c): the removal and disposal of debris arising from an insurable incident when an employer has undertaken to insure the existing building damaged by that incident;

clause 21(2): the postponement of any work to be executed under the contract (note that the architect has no authority to instruct an acceleration in the timing of any work executed under the contract);

clause 24(1): requiring the nominated quantity surveyor to ascertain loss and expense suffered by the builder caused by disturbance of regular progress of the works;

clause 27: expenditure of prime cost sums and the nomination of sub-contractors;

clause 28: expenditure of prime cost sums and the nomination of suppliers;

clause 32(2): requiring protective work in the event of outbreak of hostilities (whether war is declared or not) in which the United Kingdom is involved on a scale involving the general mobilisation of the armed forces of the Crown;

clause 33(1): the removal and disposal of debris resulting from war damage as defined by section 2 of the War Damage Act 1943 or any current amendment of that legislation;

clause 34(2): regarding what is to be done concerning any fossil, antiquity or other object of interest or value found on or under the site during the progress of the works;

clause 34(3): requiring the nominated quantity surveyor to ascertain loss and expense suffered by the builder and caused by the discovery of fossils, antiquities and other objects of interest or value found on or under the site of the works.

It is unlikely that a clerk of works would wish to give a builder directions regarding all those matters which (at paragraph 11 above) fall to be the subject of architectural "instructions". For example, few clerks of works would consider themselves entitled to give directions regarding the expenditure of prime cost sums. About some of the other matters it is interesting to speculate. Would a clerk of works give "directions" regarding the discovery of an unexploded bomb in foundation

excavations? A bomb would be an object of interest, but would it fall within the meaning of contract clause 34(2)? In such circumstances, no doubt, even the most hesitant clerk of works could issue directions under clause 21(2) requiring the postponement of further excavation works!

However, and not to depart too far from my main purpose, those matters which are expressly mentioned in the contract as requiring "instructions" from an architect do very effectively limit the directions which a clerk of works may deliver to a builder. Care is needed in those cases where an architect may make demands of a builder which do not have the stature of a contractual "instruction". For example; by contract clause 23 an architect may *require* a builder reasonably to proceed with the works to prevent delay. In such matters the clerk of works has no powers to issue directions because the architect has no power to issue instructions.

Within the restraints mentioned above the clerk of works can issue any direction he considers reasonably necessary in the circumstances. The direction has no immediate effect. A builder (if he so wishes) may ignore the clerk of works' direction until it is confirmed in writing by the architect. Therefore the good builder has a powerful contractual right when he is confronted by a bad clerk of works. The builder need do nothing until the nominated architect has approved and confirmed the subject matter of the clerk of works' direction . . . and only then if the matter is one which the architect may properly treat as falling within the embrace of a contractual "instruction".

If the architect does not confirm his clerk of works' direction in writing within two working days, then the direction probably fails. I say "probably" because of contract clause 2. By that clause the architect is entitled to issue oral instructions and may confirm them in writing at any time prior to issue of the Final Certificate (which, as we all know, is often years after the oral instruction was given). But the power to confirm in writing so late after the events only applies when the builder *complies* with the oral instruction without it being confirmed in writing either by the architect or the builder. What if the builder does not comply?

Any builder who is genuinely aggrieved by a direction issued to him by a clerk of works is entitled to do nothing until written confirmation is produced by the architect. The chain of events might be as follows:

(*a*) the clerk of works delivers himself of a bad direction;
(*b*) the builder refuses to accept the direction;
(*c*) the architect (through folly or weakness) orally approves the direction within two working days, but plays safe by not confirming his approval in writing;
(*d*) by contract clause 2(3) no oral instruction issued by the architect has any immediate effect. The builder is entitled to wait seven days (not, in this case, working days) to see whether the architect has the courage of his convictions and is prepared to commit his decision to writing;
(*e*) no written confirmation arrives. The architect is in breach of contract clauses 10 and 2(3) sufficient to excuse the builder's own subsequent failure to confirm the instruction in writing himself;
(*f*) the builder does nothing and the architect is powerless to object unless he does so in writing and puts the entire matter on a proper contractual footing.

Thus it is seen that a bad clerk of works can be made ineffective by the proper use of contract clause 10 with regard to:

(*a*) limitations of the power to direct;
(*b*) the need for written confirmation from the architect in due time.

As a word of caution, however, I repeat that goodness and badness are relative terms and in the absence of sweet reason any supposedly good builder will do himself mischief if he misjudges the true merit of any direction issued by a clerk of works. He who lives by the sword must perish by the sword; and that is true of clerks of works and builders, alike.

What is the function of the clerk of works as "inspector"?

Turning now to more practical considerations. If the duty of a clerk of works is to act solely as inspector on behalf of the employer and under the directions of the architect, what does that duty entail? Clearly it can include nothing to do with the builder's methods or day-to-day management of the construction process unless those methods or management are prejudicial to the employer's contractual interests.

I think it safe to assume that, in the vast majority of building projects, the clerk of works is mainly concerned to ensure full compliance with the contract in regard to the quality of materials, goods and workmanship expended in construction of the works. Here again, however, lies fertile ground for potential misunderstanding and abuse of power.

By contract clause 1(1) the builder is obliged to carry out and complete the works . . ."shown upon". . ."described by or referred to in"... the contract documents ..."using materials and workmanship of the quality and standards therein specified". . . provided that *where* the quality and standards are a matter for the opinion of the architect . . ."such quality and standards shall be to the reasonable satisfaction of the architect".

Note that satisfaction in an architect must be reasonable; that is, it must be the product of objective assessment and not be merely the fruit of what the architect really desires irrespective of cold reason. An architect once threatened to sue me because I had the audacity (as a mere quantity surveyor) to suggest that any architect might at times be unreasonable. In holding that view I am not alone. It surfaces, by implication, even in the words of clause 6(5) in the JCT (RIBA) standard forms of building contract, where an architect might be not only unreasonable but also vexatious.

By contract clause 6(1) all materials, goods and workmanship shall so far as procurable be of the respective kinds and standards described in the contract bills.

There we have it, then. The clerk of works owes a duty to his employer to inspect the works and ensure that all materials, goods and workmanship are of the kinds and standards described in the contract bills. In the simple discharge of that duty there should be no bad clerks of work, but a duty so simply stated becomes more complicated if a good clerk of works is misled by bad contract bills. What happens if the "kinds and standards described in the contract bills" are not procurable, or are lacking in clarity or are contradictory?

In my experience the alleged "badness" in a clerk of works is often no more than an honest man's honest attempt to insist upon qualities and standards which are supposedly described in contract bills but which (on closer analysis) are found to be illusions. Added to that is the increasingly prevalent belief amongst architects that standards of dimensional accuracy appropriate to precision engineering are achievable, also, in the building industry. Such beliefs are transmitted to inexperienced clerks of work who descend upon the works in progress like avenging angels armed with straight-edge and set-square and the simple faith that they are absolutely right in their opinions. Sometimes they are right; but more often

than not, they are wrong. And their error can cost their employer's a great deal of money in loss and expense payments or damages for breach of contract.

By contract clause 11(1) an architect is entitled to issue instructions varying the quality of the works from the quality described in the contract bills. Therefore a clerk of works may issue directions regarding the quality of materials, goods and workmanship. If the architect supports and confirms the clerk of works' direction so that the builder is obliged to act on it, then the direction becomes an instruction authorised by the contract. The architect must be sure of his ground. He may unwittingly be varying the quality from that "described in the contract bills" if those bills are not very carefully prepared. Later in this paper I quote illustrations which show how easily this is done, in each case drawing from my actual experiences.

If there was only one quality or standard (and those both good), how simple life would be. There would be no disputes on building projects. All things would be perfect examples of their own kind. But in such a system of perfection there would be a total absence of variety. Anything which was worse or better than the one acceptable quality or standard would be rejected because it failed to comply with the descriptions of the contract bills. I start from this absurd position merely to show that there ought to be no single acceptable quality or standard. In practical terms it must be reasonable to insist that qualities and standards fall within a permitted range; being no worse than this extreme, and no better than that. The width of the range will depend upon all the circumstances. A quality quite acceptable in a dockland public convenience will seem out of place in a crown court, even though the same persons might appear in both.

In this imperfect world, thanks be to God, variety is the spice of life. An architect may make his choices from very wide ranges of competing materials, goods and workmanship so that the completed building bears the imprint of his personality. On the other hand the architect might be a disillusioned perfectionist whose personality has been submerged in the cruel sea called cost control. Such an architect is quite capable of leaving his specification vague so that the contract bills merely ask for "the best possible standard" or "compliance with British Standards".

What are the best possible standards? Is that something like the kinds and standards of contract clause 6(1) which are to be produced by a builder only . . ."so far as (they are) procurable"? Pity the poor clerk of works faced with the problem of sorting out these dilemmas. Contract clause 6(1) is bad enough without having to decide what is or is not possible. Everything is possible if there is the money and the time to create or buy the necessary ability. However, very few building employers have either the money or the time to insist on perfection merely for the sake of perfection. Even if there is money and time enough, few employers take the trouble to ensure that their architect describes perfection in contract bills.

In the event of a dispute about qualities and standards a builder might be driven into bankruptcy by a bad clerk of works. I know some that have been who might still be in business if only they had realised how insecure was the description in the bills of quantities which condemned them to ruin.

Many quantity surveyors and architects place great importance on British Standards and British Standard Codes of Practice. They use them as a convenient shorthand to simplify the task of describing qualities and standards in bills of quantities which eventually become contract bills. "All goods shall comply with the relevant British Standard" is a common enough description in bills of quantities. It does not much matter that neither the quantity surveyor nor the architect has a copy of the relevant British Standard. In all probability, nor does the builder. All three parties share a common respect for, and a common ignorance of, the recommendations and requirements of the British Standard. In the event of dispute it is unlikely that anyone will take the trouble to check a copy of the British Standard to discover precisely what it says. If anyone does check, more likely than not he will check not the British Standard itself but that brief abstract of the main points which is frequently found in firms associated with building and which is widely mistaken for the complete British Standard.

I was once called in to advise on problems arising from an architect's condemnation of galvanised tee bars in a suspended ceiling system which had begun to show signs of rusting. The tee bars had been described as "galvanised to British Standards" without any reference to any particular BS number. I found that there are several British Standards for galvanising, some of which deal with several different grades and conditions . . . and the specified tee-bar was too thin for effective galvanising, anyway! In that case a great deal of money was at stake, massive disruption and a liability for alleged latent defect lasting until forever.

A simple rule should assist both a good clerk of works and an aggrieved builder; take nothing for granted. Check every description of quality and standard against the authoritative document which purports to state the contractual obligation. Check any relevant British Standard to ensure that a contract document does accurately and precisely specify that which is wanted by the employer, without option or ambiguity. Only when all doubt is removed can a clerk of works safely commit himself to a direction, or an architect to a confirmatory instruction.

However, the clerk of works must consider other problems. How valid is a British Standard even when one does exist which is appropriate to the circumstances? British Standards do not form part of the contract documents. The effect of a British Standard *may* be imported into a contractual specification and be binding on a builder . . . but only if the architect has done his work properly. If there are alternative British Standards which are equally appropriate to the circumstances (as, for example, with regard to precast concrete) and the architect has failed to specify which one shall apply, then the specification fails for want of certainty.

Then, again; British Standards contain both requirements and recommendations. For a product to qualify to bear the kite mark of the British Standards Institution it must comply with the "requirements" of British Standards, but the "recommendations" are discretionary. Before a clerk of works can condemn goods or materials he must be sure that his complaint concerns a failure in the builder to comply with the descriptions of the contract bills. If those bills do not ask the builder to comply with the "recommendations" of any British Standard, then there is no contractual compulsion to do so. A discretion which lies outside the contract can hardly be an obligation within it unless there are very clear words to make it so.

As far as I can ascertain from my present knowledge of British Standard Codes of Practice (which are mainly concerned with standards of workmanship) they are entirely discretionary. Many codes of practice offer alternative recommendations. Therefore, in the absence of very precise specification descriptions the same problem arises as with goods or materials; a discretion which lies outside the contract can

hardly be an obligation within it unless there are very clear words to make it so.

If the clerk of works thinks he has reached the end of his problems regarding British Standards and the descriptions of contract bills, he is mistaken. Different British Standards are drafted by different committees acting independently of each other and often as remote from each other in time as they are in subject matter. There are incompatibilities between different descriptions in any bills of quantity, and between many British Standards.

I knew one clerk of works who honestly believed he was doing his duty by condemning two-coat plasterwork which showed a deviation from a true face of more than one eighth of an inch in six feet (as it then was in the good old days). He justified his action by quoting chapter and verse from the British Standard Code of Practice for Internal Plastering. Mildly put . . . there was very expensive trouble, during which attitudes hardened on all sides. The architect supported the clerk of works' condemnation. At the time nobody gave a thought to the British Standards which governed the standards of dimensional accuracy in the background surface which was receiving two-coat plasterwork. When the builder eventually took advice on the matter it was found that the specified British Standard for building blocks permitted dimensional distortion which could not be covered by two-coat plasterwork without deviation from a true face well outside the tolerance suggested as reasonable by the Code for internal plastering. That Code has now been changed to reduce the risk of similar misunderstanding, but even the revised words are capable of mischief.

To the simple rule, "take nothing for granted", can be added a second rule; do not be restricted to the narrow view. In the event of dispute regarding the kinds and standards of contract bills look around and behind the disputed matter to see what impact is made on it by other, associated, matters.

Conclusion

In my experience of problem building projects the problems are most often caused by a lack of reasonableness in architects and clerks of work. There are unreasonable builders, as well, but their unreasonableness responds very quickly to the principle that he who pays the piper calls the tune. Any architect can have his way against a bad builder by regular valuations of only that work which the architect considers properly executed. On the other hand, however, a builder has no such immediate redress if unreasonableness flows from clerk of works or architect. All the builder can do in such circumstances is to register his dissatisfaction and struggle on in disrupted conditions trying to achieve the impossible.

Disputes about standards generally concern finishings. I despair of architects and clerks of work who do not appreciate that a building owner must pay very dearly for the doubtful privilege of having every facing brick laid exactly central in its own modular space. Either the contract rate will be very high . . . if the brickwork standard is properly specified, or the builder's loss and expense claims will be if the standard is badly described. Trueness of plastering systems and (to a lesser extent) the quality of joinery are other fertile grounds for dispute.

The building process involves the use of many materials which cannot be produced to very fine standards of accuracy; and those materials being then set into a structure exposed to the elements and subject to infinitely variable stresses, strains and movement . . . to say nothing of the differing human hands involved. In such a context must stand any dispute as to what is reasonable. If the context were more often remembered, there would be fewer disputes.

PRACTICE NOTES

Basic Cost Trends Wallchart

A new 'Cost Trends Wallchart' has been published by the Building Cost Information Service of the Royal Institution of Chartered Surveyors.

Figures show that construction costs have increased by more than 200 per cent since 1970 with the greatest rise occurring since 1974. Meanwhile, tender prices (while outstripping costs during the period 1970–75) have fallen behind, with a continuing widening of the gap between building costs and tender prices.

The poster-size wallchart illustrates the movement in tender levels and building costs from the beginning of 1970 to the end of 1978. These are shown against the background of general inflation, the output of the construction industry and the demand for its services.

The wallchart shows the movement of the BCIS Tender Price Index, the BCIS General Construction Cost Index, the BCIS Index of All-in Hourly Rates for building craftsmen, the DoE Index of Construction Materials Prices and the Department of Employment's Retail Price Index. Activity indicators in the form of construction output figures and building contractors' new orders are also shown, at constant prices.

The wallchart has been supplied free to all BCIS main subscribers. A limited number are available to non-subscribers – price £2.00 per copy (postage and packing included) and obtainable from: Building Cost Information Service, 85/87 Clarence Street, KINGSTON UPON THAMES KT1 1RB.

The Arbitration Act 1979

Further to the Practice Note in the March edition, the Arbitration Bill was among those of a non-controversial nature which were hurried through their remaining stages before Parliamentary business was concluded prior to the general election.

In those circumstances, a number of important amendments proposed in both Houses had to be dropped on the basis of choosing between 'the Bill as it is – or nothing (in this Session)'.

It can be expected, therefore, that further and more comprehensive reforms may be the subject of another Bill as soon as the necessary time and effort can be directed to that end – both outside and inside the Houses of Parliament.