incur considerably increased costs and extra time spent by the Architect and/or his staff, whilst the possibility of error in reference to the correct sub-sections of a Condition Clause are very high and therefore if the Architect is to protect himself and the Employer's position there will be a necessity to use the services of senior staff in dealing with all correspondence on any contract let under JCT 80 which cannot but incur extra costs and take architectural staff away from their primary purpose in life which is the designing of the works. In addition to what has been stated heretofore attention must also be drawn to the fact that JCT 80 is based upon the use of the SMM6 under which, as I feel most people are now aware, the Architect is required to provide to the Ouantity Surveyor sketches and other drawings at the stage of the taking off of the Bills of Quantities, whereupon the Quantity Surveyor need only to refer to same without fully describing the works required. In an ideal situation this system may be perfectly satisfactory, but the ideal situation so rarely exists and in very many cases the time allowed for preparing the Bills of Quantities and getting the documents prepared and sent out for tender is not as long as either the Quantity Surveyor or Architect would desire, so that again a factor has been introduced which has a high probability of the Bills of Quantities and the associated sketches and drawings being amended or altered in some manner as and when the Architect settles his final design require-

ments, because with all due respect to Architects and after, as I have stated, a lifetime in the Industry it is only rarely that the Architects' drawings are absolutely correct in every detail and thus the sketches and drawings to comply with SMM6 only need to be slightly different to the final details and immediately you have a prime area for claims to be generated, the responsibility for which will of course then rest upon the Architect and his staff rather than upon the Quantity Surveyor, as was the position prior to the issue of SMM6.

The reaction so far expressed to this JCT 80 indicates that it is not loved by the Architects and up to the present time shunned by the major Quantity Surveying Practices, whilst the well organised Contractors and Sub-contractors can only in my opinion regard any estimate given under this Form of Contract as being only a notional figure to which the final account will bear no relationship, so that when one hears that the DOE is actively encouraging Local Authorities to use JCT 80 it is only possible to express amazement, because the use of JCT 80 indicates that it is not loved by the expenditure by increasing the architectural staff of such Local Authorities although this is directly contrary to the Mandate on which the Government was elected and is entirely contrary to what we have been led to understand is the objective of the Right Honourable Minister responsible for the

With Architects needing to increase their

costs in order to attempt to cope with the JCT 80 and SMM6 and the Contractors improving their organisations to be able to comply therewith there will be some rise in cost of building operations, but the real total cost of the use of JCT 80 will not be shown for one or two years after the first contracts on this form are entered into, and it is as and when the final account comes towards settlement stage that the real extra costs incurred by the use of this Form of Contract will come to light, and it is at this stage also that it will be begun to be appreciated that although the JCT 63 might have been the subject of adverse comments by the Courts, including it being described as "notorious for its obscurities" such expressions will be very mild compared to those which the Courts use as and when they have to consider

In conclusion and to give your readers the benefit of my many years of experience in dealing with contracts of all types I would state that in my opinion whilst JCT 80 may be operated by people like Local Authorities who have a bottomless purse and can just throw the cost on the ratepayers it is not a Form of Contract which can be for general use, so that in the event that it does come into general use I as a Contractors' Claims Consultant would be only too pleased knowing, as I do, the scope and opportunities which would then be afforded to me in representing my Clients.

## Postgraduate Courses in Construction Management By R. F. Fellows, BSc(Hons), AIQS

By R. F. Fellows, BSc(Hons), AIQS fragmentation of the industry producing cation

R. F. Fellows

During recent months the technology gap, between those who design building and civil engineering projects and those who perform the construction activities at the workface, has received a considerable amount of attention in the press, prompted by failures of buildings.

This situation is compounded by the

As an avid reader of "The Quantity Surveyor", I have noticed that whilst the Journal has carried many articles of current importance and interest upon a wide variety of subjects, quite naturally certain problem areas of our profession and the construction industry in general have not received such attention.

In my perception and experience of the industry (such as it is), the basic and probably increasing problems of a widening "technology gap" between designers and operatives at the workplace and the ever more complex communications networks for the proper and accurate transfer of information have been the subject of comment in the popular press but not to any significant degree in the relevant specialist journals.

I have therefore drafted my own views regarding a realistic and practical solution to these quite basic (and acknowledged) problems in the hope that consideration of these issues might be stimulated.

I consider this to be a most appropriate forum, as the following article clearly demonstrates, for it seems to me that the quantity surveying profession may well hold the key to resolving the technology and communication dilemmas.

exceedingly complex chains of communi-

cation between the parties concerned with any project. Such points were succinctly expressed by Dr. William Allen as part of an article, discussion problems of the Scotland Yard building in "The Guardian", 18th September 1980.

The question which springs from the basic premises of necessary technology and its advancement leading to a "technology gap" and the problems of adequately communicating the requisite information from the designers to the builders is, "How can the technological aspects be accommodated and the associated communications problems overcome?"

Education, I would suggest, is the answer. The purposes of education are numerous but in the field of higher education two major purposes must be:

- to produce experts in various subjects, and
- to ensure those experts appreciate their role, the roles and problems of people with whom they work and the ultimate effects of their actions. Communications is thus a vital part of higher education.

Already many first degree and equivalent courses in Building disciplines exist. These are filling a vital gap in Building education. Many are of the "broadbased", sandwich type giving a wide appreciation of the

## **CONSTRUCTION MANAGEMENT**

industry, with actual industrial experience an integral part of the course and a good level of specialist skill upon graduation. This is appreciated by the industry and professions alike as evidenced by the figures for employment of Building graduates and the institution membership exemptions obtained.

First degree level education has been available for some time in specialist disciplines, perhaps most obviously civil engineering. The evolution of other construction courses such as building services, construction management and quantity surveying occurred more recently, many of these new degree courses producing their first graduates in the late 1960s or early 1970s. These graduates are now approaching mid-career usually having gained a professional qualification soon after graduating and so are likely to be seeking further career development often, and increasingly so in the case of quantity surveyors, involving a shift in emphasis. This is particularly manifested by the extent to which quantity surveyors switch to contracts management at a midcareer point.

Postgraduate education in Building disciplines falls into three broad classifications:

- 1. research
- 2. conversion courses
- 3. specialist courses

The majority of this postgraduate work is full time but is somewhat different from many other disciplines in that the specialist courses are not only postgraduate but also post experience (ie. the students have worked some time in the industry, usually a minimum period of two years after graduation or obtaining an equivalent qualification).

Specialist postgraduate courses in Building therefore tend to be post experience, midcareer education equally available to those with a "degree equivalent" industrial or professional qualification as to those with a first degree. This means that the courses usually contain a wide variety of students with diverse interests and experiences.

One practical problem for such education is that of students obtaining the facilities to undertake the selected course—the year off for full time study and the necessary financial support for that period. This has prompted a few universities to offer part-time postgraduate courses in association with a full-time course. At Brunel University, however, an exclusively part-time one day per week over two years MSc course in Construction Management has been instigated.

The course has attracted applications from a wide variety of Building disciplines. The existing students include builders, quantity surveyors and civil engineers. The course provides a specialist education in Construction Management and so attempts to advance the technical knowledge and understanding of the students. Finally, however, it places great emphasis upon seminar activities—the exchange and communication of information between staff and stūdents so that all the knowledge and expertise within the group may be called upon, exchanged and utilised for problem

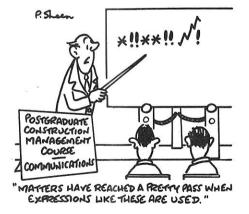
solving.

The part-time nature of the course also acts as an enhancement for participants to discuss ideas, theories and problems frequently with their colleagues in industry and so bring further opinions, ideas and expertise into the classroom forum.

It is in such a form of postgraduate education that a quantity surveyor, wishing to extend his knowledge and broaden his expertise preparatory to embarking upon a position in contracts management, will be encouraged not only to fulfil these traditional academic goals but also to benefit from the experiences of others to gain a "head start" in any career re-direction.

Surveyors have, even in the contracting industry, often been regarded as a "set apart", operating in their specialist way on the periphery of the cut and thrust of main line management. The increasing cost consciousness of society has promoted their closer involvement in all management activities and decisions and so their incorporation into contracts management introduces yet another technology and link in the communications network requiring full integration for effective functioning.

The solution currently proffered by the Department of Building Technology at Brunel University to the two-pronged problem of technological advancement coupled with communications enhancement is the part-time MSc degree in Construction Management, the philosophy of which has been outlined above. By the inclusion of such subject areas as Management Principles, Management Practice and Economics, two of which are studied in each of the two years of the course and are brought together by constant consideration of case studies as the taught part of the course (after which each student must complete a major project upon a suitable topic, selected by the student), all construction management related disciplines will find ample opportunities to extend their particular expertise and very significantly broaden their knowledge and appreciation of related areas. Education attempts to provide the means, industry provides the acid test for success or failure.



GUIDE TO AGREEMENT FOR MINOR BUILDING WORKS

A detailed commentary on the 1980 Agreement for Minor Building Works is given in the latest paper issued in The Chartered Institute of Building's Surveying Information Service. Written by Myles Audas, MCIOB, "A builder's guide to the Agreement for Minor Building Works—January 1980 edition" provides some background information on the scope and purpose of the Agreement, on its style and format before attention is given to the Recitals and Articles.

This is followed by the main substance of the paper which is in a two column format thereby allowing the content of each clause to be set alongside the commentary.

With greater attention being given to the potential use of the Agreement as an alternative to the JCT main form of contract, this new publication will be invaluable to all participants of the building team.

Copies of Surveying Information Service Paper No. 3 "A builder's guide to the Agreement for Minor Building Works— January 1980 edition" are available from the Sales Office, The Chartered Institute of Building, Englemere, Kings Ride, Ascot, Berkshire SL5 8BJ, price £2.00 plus 45p postage and packing to Members, and £2.50 plus 45p, to non members of the Institute.

## ONE MAN'S APPROACH TO STRUCTURAL SURVEYS

The latest paper issued in The Chartered Institute of Building's Maintenance Information Service is "Structural Surveys" by Steve Staveley, who takes a highly individual realistic look at the structural surveying scene.

In the first part of the paper the author gives some basic guidelines on procedures that should be adopted in carrying out the survey and he makes reference to the purpose of the survey, the client's instructions, survey preliminaries, the inspection process itself and report writing.

This is followed by a section which deals specifically with the surveying of health service properties and those particular facets of the surveying process which may be anticipated.

The final section provides a light hearted yet extremely informative dissertation on the basic qualities of the structural surveyor, the characteristics of period buildings and of those local characteristics which are relevant to building types.

Some extremely helpful advice is given on the precautions which a surveyor should take in regard to occupiers of properties being surveyed. Most attractive appears to be what is described as "the seductive female". Mr. Staveley remarks that these are generally in short supply but when encountered are prepared to go to almost any lengths to distract the surveyor in the way of fluttering eyelashes, deep plunges and in extreme cases provocative attire. Mr. Staveley stresses "that on no account in cases such as this could one retreat into the roof void where one would be immediately cornered; excuses should be made to fetch further equipment from the car and to return to the office". Appropriate solutions may include making a new appointment when the husband was at home or alternatively to hire a female surveyor! All in all this paper should prove of interest to all concerned with surveying and to the general reader for that matter.

Copies of Maintenance Information Service Paper No. 15 "Structural Surveys" by H. S. Staveley are available from the Sales Office, The Chartered Institute of Building, Englemere, Kings Ride, Ascot, Berkshire SL5 8BJ, price £1.20 plus 25p postage and packing to Members, and £1.50 plus 25p to non members of the Institute.