

THE SILVER BOOK - The Reality

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Letter to *The International Construction Law Review* from Christopher Wade, Chief Engineer, SWECO International, Consulting Engineers, Stockholm, Sweden
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FIDIC Conditions of Contract for EPC/Turnkey Projects, First Edition 1999

AUTHOR'S NOTE

This article was prepared some months ago after a number of papers had appeared in this Review and in certain other publications which were generally negative to FIDIC's "Silver Book" and contained some disparaging and unfounded remarks. These texts are:

- The new FIDIC EPC BOT contract: J. Bruno de Cazalet and Rupert Reece (November 1999) [TEXT >>](#)
- A New Standard for International Turnkey Contracts - The FIDIC Silver Book: Pierrick Le Goff (2000) [TEXT >>](#)
- A Contractor's view on FIDIC Conditions of Contract for EPC Turnkey Projects: Agne Sandberg (2000) [TEXT >>](#)
- EIC Contractor's Guide to the FIDIC Conditions of Contract for EPC Turnkey Projects (March 2000) [TEXT >>](#)

However, the author is gratified to note that since then several positive articles, giving a much more balanced and sound commentary on the Silver Book, have made their appearance. Among these may be mentioned the useful and constructive article in the April 2001 issue of this Review by Jeffrey Delmon and John Scriven entitled "A Contractor's View of BOT Projects and the FIDIC Silver Book".

PROLOGUE

Certain recent articles written by contractors and lawyers have criticized FIDIC's so-called Silver Book. It is felt that much of the criticism has been biased and generally unfounded. While constructive criticism is always welcome, it is disappointing to read - in distinguished publications such as ICLR and from lawyers, who as a profession are trained to read 'fine print' - the misconceptions and misguidance that some of these articles have displayed. For example, much of the flak directed recently at the Silver Book concerns problems that may arise when using the Silver Book on projects for which FIDIC has indicated it is not suitable, and for uses for which FIDIC has not recommended it. FIDIC can, of course, not be answerable to employers or contractors, or both, who do not observe the instructions and guidance notes for the use of its forms.

It can also be noted that, when responding to criticism about its forms of contract and particularly the Silver Book, FIDIC feels a bit like a judge required to decide a dispute in a case where only one party and its lawyer are present to argue the case. When it comes to debating FIDIC's forms of contract, contractors are active and well organized and lawyers are vociferous on their behalf. On the other hand, employers are not organized and their interests are not well represented in relation to FIDIC's forms of contract, other than by development banks. With some notable exceptions, lawyers do not generally speak out for employers. Nevertheless, despite the existence of a somewhat one-sided debate, FIDIC is required to arbitrate between the interests of contractors and those of employers as best it can, and make decisions which take

account of the interests of both parties.

Introduction

FIDIC – the International Federation of Consulting Engineers - published in September 1999 a suite of four new Standard Forms of Contract. This new suite comprises:

- Conditions of Contract for Construction for Building and Engineering Works Designed by the Employer : *The Construction Contract*
- Conditions of Contract for Plant and Design-Build for Electrical and Mechanical Plant, and for Building and Engineering Works, Designed by the Contractor : *The Plant and Design/Build Contract*
- Conditions of Contract for EPC/Turnkey Projects : *The EPC/Turnkey Contract*
- Short form of Contract : *The Short Form*.

The Books in the new suite are all marked 'First Edition 1999', and the reason is that they can not be regarded as direct updates of FIDIC's very well-known and widely used 'Red Book', 'Yellow Book' and 'Orange Book', i.e. respectively:

- Conditions of Contract for Works of Civil Engineering Construction (1987)
- Conditions of Contract for Electrical and Mechanical Works including Erection on Site (1987)
- Conditions of Contract for Design-Build and Turnkey (1995).

Publication of the 1999 Books has aroused considerable comment. The Construction Contract, The Plant and Design/Build Contract and the Short Form appear to be generally well received by all parties. (*These are popularly referred to as the 'New Red Book', the 'New Yellow Book' and the 'Green Book' respectively because of the colour of their covers.*) The EPC/Turnkey Contract, (*the 'Silver Book'*), has, however, not unexpectedly, received a mixed reception. There has been considerable positive comment, and several positive articles, but, while some interested players seem so far to have remained cautiously silent, there are a number of contractors and lawyers who have been vociferous in their protests.

Two examples are to be found as the lead articles of the recent October 2000 issue of The International Construction Law Review, namely "The Silver Book: An Unfortunate Shift from FIDIC's Tradition of being Evenhanded and of Focusing on the Best Interests of the Project" by A H Gaede, Jr, of the US, and "EIC Contractor's Guide to the FIDIC Conditions of Contract for EPC Turnkey Projects (The Silver Book)" with an introduction by Frank Kennedy of the European International Contractors.

Before more contractors and lawyers jump on the protest bandwagon, FIDIC's Contracts Committee feels that it is perhaps useful to explain once more the philosophy and reasons behind the new suite of Standard Forms, with particular reference to the Silver Book, and hopefully bring some of the discussion and arguments concerning the Silver Book, which are tending to become rather one-sided and entrenched, back on to a sober even keel. After all, it was FIDIC's intention - and is FIDIC's belief - that the Silver Book would be of benefit to all the parties to those EPC/turnkey projects for which it was designed, not least to the contractors.

It would therefore seem suitable to use these two articles as a basis for a reply explaining the FIDIC viewpoints. This reply does not attempt to give an exhaustive answer to all the points raised in the articles, but more to give explanations of the

philosophy behind the various clauses, and answers to the more important points.

Conception of the Silver Book

FIDIC established in 1994 its Red Yellow Update Task Group (the Task Group) with mandate to update the existing Red and Yellow Books. The Orange Book was about to be published (1995) so the Task Group did not envisage digressing into the sphere of design-build/turnkey projects (except to harmonise as far as possible with the Orange Book). However, during early considerations in the Task Group of the use of the different international and national standard contract forms and of the various methods of procurement around the world, it was realised that, even if the Red and Yellow Books were being used widely, there were a great many construction contracts in many countries which were not procured nor managed along the principles set out in the Red and Yellow Books. At that time it was by no means the BOT type, privately financed projects that were uppermost in the Task Group's considerations. While these were increasing, it was more the conventional type that the Task Group felt were falling outside the Red/Yellow Book scope.

Such projects included all those where employers in many countries took the Red or Yellow Books (to save themselves the trouble of doing their own drafting) and struck out the word 'Employer' in some or all of the clauses where FIDIC had placed some obligation on the employer, and replaced it by the 'Contractor'. Such contracts were then not 'FIDIC contracts' as the even balance of risks for which FIDIC's Books were renowned had been changed. Other projects were those without the traditional 'Engineer'. The Anglo-Saxon concept of the independent, trustworthy, almost 'venerable' Engineer, guiding the project and deciding on right and wrong has never been understood or accepted in many countries, for example many civil law countries, and there the direct two-party system of Employer – Contractor always has been the norm. The 'Engineer' concept has also often been ridiculed by lawyers and others who cannot understand how someone paid by one party can be fair to the other party, and the fact is that for many projects nowadays the person delegated to be 'the Engineer' has no chance of actually carrying out his duties impartially.

One of the main reasons for many employers' attempts to pass as much risk to their contractors as possible stems from the inflexible budget requirements of their organisations. This also leads to their shackling of the 'Engineer' or his equivalent who supervises the construction work. FIDIC's traditional balanced risk-sharing has meant that the Contractor has taken the construction and other risks which he can reasonably estimate, while the Employer has taken the risks of the unforeseen and other circumstances which cannot reasonably be reckoned in advance. In this way an employer pays extra *only* when such circumstance arises, and does not pay a premium estimated by the contractor to cover the risk of such circumstances. This leads to a lower contract price (i.e. without the premium) in the majority of cases, a higher price being paid only in those cases when unforeseen circumstances actually occur.

However, the Task Group realised that it is a fact of life that many employers demand a 'fixed, lump sum contract price' without increase when unexpected circumstances arise. They are blind to the argument of not paying for unexpected risks except when they actually occur; or else their budgets do not contain sufficient contingency allowances, or any such allowances at all. So on such contracts the employers have to pay more; they have to pay the premiums the contractors have added for the contractors to take these extra risks. (Sometimes employers do not realise that even on 'fixed, lump sum contract price' contracts there are always *some* risks that the employers will have to take, but that is another story!)

Not only is it a fact of life that many employers have always demanded ‘fixed, lump sum contract prices’, and that FIDIC did not have a suitable standard form to cater for such demand, but in recent years the trend has been towards private financing, not only of private investment and speculative projects, but also of public infrastructure projects. The prerequisites for obtaining private finance for a project are vastly different from those of obtaining government or other public money. Private financing requires that the project is independently viable in financial terms, and that there will be, so far as possible, an assured return on the finance provided. The lenders on a BOT or similar project will do their calculations showing the outlay over the construction period and the income over the succeeding operation period. For the return to be reasonably assured, the bases for their calculations will have to be as firm as possible. If the construction work costs more than reckoned (inclusive of any contingency allowance), then the calculations will not hold. If the construction time is longer than planned, then the income will not begin to come in on time, and the calculations will not hold. Therefore, such lenders have to ensure that the risks of cost and time overruns of the construction contract are limited as far as humanly possible. Such lenders are aware that contractors will have to charge a premium for carrying the additional risks necessary to provide the required greater security of construction cost and time. The premium in certain cases may reasonably be large. However, they would rather accept such premium and include it in their calculations before embarking on the project, than discover later on that the project is no longer viable and that they are incurring an overall loss.

Thus the Task Group and FIDIC realised that both many traditional employers as well as the private financing market demanded a form of construction contract where the possibilities of extra payment and extra time would be limited to a greater degree than under the traditional Red and Yellow Books. It was also understood that the concept of the traditional Engineer’s role would no longer fit in this scenario. FIDIC considered carefully whether such a standard form should be produced by FIDIC, and what effect the departure from FIDIC’s traditional policy of balanced risk sharing might have.

FIDIC, bearing in mind its position as exponent and even in some respects guardian of the best modern engineering practice, came – rightly or wrongly -to the conclusion that one has to move with the times, and that it is often better to face up to the market demands, rather than deny their obvious existence. Moralists may condemn sex before marriage, and environmentalists may regret the advent of the motor car, but one cannot halt progress. FIDIC felt that the best service it could give to the industry at this time would be to come out into the open with a standard form to satisfy those needing more security of final cost and time than FIDIC’s traditional forms can give. In this way it would not be necessary for such employers to mutilate the traditional forms as they have done; a purpose-made form would be available. As the purpose-made form became known and used, contractors would have a reliable alternative instead of having to accept a botched-up, home-made contract proposal, often concocted somewhere in the employer’s organisation by engineeringly inexperienced staff, as has so often been the case hitherto. In other words, by setting out clearly exactly which party is to bear which risk, contractors (and employers) can enter into such contracts with their eyes wide open, clearly aware of what risks are their responsibility, instead of fumbling about in the darkness and hoping for the best, as circumstances have often required them to do in the past. Therefore FIDIC believes this Book to be of benefit to all parties, not least to the contractors.

It is also important to note that all the FIDIC Books are produced by engineers for practical use. They basically contain good, common sense, practical, modern, engineering procedures, spelling out the risks, responsibilities and obligations of the

parties. They seek to keep up in a pragmatic way with the positive developments in the industry, an industry where innovations in project procurement and execution are changing rapidly. There is little use in recommending high ideals from a bygone age, which few will follow.

With regard to the EPC contracts in a BOT or similar environment, (as, indeed, with all other contracts) FIDIC does not pretend that the Silver Book is the panacea to fill all circumstances. FIDIC notes that this Book is intended for those contracts where greater certainty of final price and time is required, and for EPC contracts such increased security is usually required. However, EPC contracts in a BOT or similar environment are normally subject to considerable negotiation before the final terms are concluded. What FIDIC says, therefore, is that the Silver Book should provide a suitable starting point for such negotiations. FIDIC feels that, even if such negotiations may lead to extensive adaptations in particular contracts, such adaptations do not do away with the usefulness of having a standard form (with examples of alternative wording) as a guide at the outset.

Thus the Conditions of Contract for EPC/Turnkey Projects was conceived some time about 1996, and first saw the light of day in Test Edition form in 1998.

Some points of principle

Having stated reasons for FIDIC's production of the EPC/Turnkey Contract, i.e. the Silver Book, let it be clearly stated that FIDIC has not given up the traditional principles of balanced risk sharing. Wherever possible FIDIC would advise use of the New Red or New Yellow Books which still embody the traditional principle of balanced risk sharing between employer and contractor. FIDIC is fully in favour of the accepted principles of risk being borne by the party best able to manage the risk, and, as stated above, FIDIC knows that the balanced risk sharing of the New Red and New Yellow Books means a lower contract price in the majority of cases (the occasional higher price resulting when an unexpected risk actually occurs, and therefore when it is correct to pay the extra costs arising). FIDIC also would recommend that a construction contract is supervised by a qualified independent 'Engineer'. The reason is not purely selfish – the main reason is that efficient management of a construction contract, and the maintaining of proper relations between the two contracting parties in accordance with the contract terms they have agreed upon, by an experienced independent engineer, is a most important factor in the successful execution of a project, and in the avoidance of misunderstandings and disputes.

However, when – as described above - one or other, or both, of the parties is not willing to accept the traditional risk distribution advocated by the New Red and New Yellow Books, or does not wish to have help of the traditional 'Engineer', then FIDIC has now presented them with two completely new standard forms. They have the option of using the Green Book – if the project is of relatively small capital value, or short construction time, or otherwise for fairly simple or repetitive work – or, for other construction works under a turnkey type of arrangement, the Silver Book. In this way FIDIC is clearly responding to the demands of the market, but the publication of the Silver Book should not be taken as a recommendation by FIDIC to leave the well-trying, advantageous risk sharing principles of the New and the Old Red and Yellow Books.

Let us now consider some other pertinent factors which FIDIC has had to take into consideration in the preparation of these standard conditions. The documents have, of course, to be legally sound, but the first intention is that they shall be 'manuals of good engineering practice'. They have been prepared by experienced engineers who know how engineering contracts are managed, both in the office and in the field. A well-

known international lawyer has been an important member of the drafting committee, but the intention has always been to produce user-friendly documents to be of practical use as a management tool for engineers in an engineering context. They are also intended for general use, i.e. for use on projects of all sizes and complexity – from relatively minor and uncomplicated projects through the whole range up to major complicated projects. This means that during the drafting consideration has always to be given to the level of detail necessary to achieve the aims of user-friendliness, e.g. simplicity, on the one hand, versus sufficiency, i.e. completeness and being robust enough to counter legal argumentation, on the other hand. Hopefully the Books are satisfactory for the majority of projects, but for the particular requirements of complicated individual projects there may often be the need for drafting of complementary or modified wording.

This brings us to the question of the criticism of the Silver Book, which has almost exclusively referred to the use of the Silver Book in the context of BOT type projects. Yes, FIDIC says the Silver Book may be used for EPC construction projects of the BOT type, but normally as a suitable starting point for the negotiations that invariably take place on such complicated projects. However, it is expected that the majority of projects where the Silver Book will be used will not be the relatively few BOT type projects, but will be all those other more normal fixed, lump sum price turnkey projects where employers demand more security of price. Whereas the large BOT type projects invariably involve teams of lawyers capable of developing the specific project's own detailed legal conditions, for the majority of those more normal turnkey projects described above it is expected that the Silver Book will suffice, with only moderate modifications.

In passing, when discussing adaptation of the EPC/Turnkey Book to suit a particular project, readers are reminded that suitably experienced staff or experts should always check that all clauses in the Book (and, indeed, in any other standard conditions) are actually appropriate and applicable to their particular project. The clauses in the Books are not sacrosanct. FIDIC has included in the General Conditions those stipulations which were felt to apply to the majority of projects. In many cases FIDIC has suggested alternative wordings in the Guidance section of the Book. Also, for purposes of user-friendliness, many of the clauses can be easily deleted or not invoked. In fact, several of the clauses will not apply unless figures or details are specified in the Particular Conditions. Furthermore, if a clause in one Book is unsuitable, the corresponding clause from another Book may often be imported. This may be particularly relevant when a project using the Silver Book may have unforeseen ground conditions. In such a case it would be suitable to replace Clause 4.12 of the EPC/Turnkey Book with Clause 4.12 from the Plant and Design-Build Book. Another example would be where the Silver Book is to be used for a project involving extensive work on site, and thus it might be suitable to replace the *ad hoc* Dispute Adjudication Board (DAB) of Sub-Clause 20.2 by the standing DAB of Sub-Clause 20.2 of the Construction Book.

A further point of principle perhaps needs emphasising. FIDIC does not have the luxury of being one-sided. While others may criticise clauses that they feel do not suit their party, FIDIC strives not to favour any one party, and, if it did, its standard conditions would not achieve universal acceptance. If contractors, at first glance, think that the Silver Book favours owners and lenders, and may be an additional weapon in the hands of unscrupulous employers, then they should first remind themselves of the position they are often placed in nowadays, with badly prepared, one-sided documents thrust under their noses to 'sign or else!'. Then they should also take another look at the several clauses in the new Books, including the Silver Book, that favour the contractor, as compared to the contractor's traditional position under the old Red Book. If Messrs.

Gaede, Kennedy and others were evaluating the Silver Book in a balanced way, then they should take account not merely of the new provisions that they feel are unfavourable to the contractor, but also of the new provisions that are favourable to the contractor, for example Clause 2.4 which requires employers to provide evidence that they are able to pay, and Clause 2.5 which regulates claims the employer may have. Several contractors have also been heard to say that they regret that the independent 'Engineer' has been removed in the Silver Book. If FIDIC had been one-sided he probably would still have been there!

New provisions favouring the Contractor

As indicated above, it is noticeable that articles criticising the Silver Book usually omit reference to new provisions which may be said to favour the Contractor. As up to now readers of ICLR have only been hearing about the disadvantages of the Silver Book for contractors, it could be useful to set out some of the new clauses that favour the Contractor, which have been introduced into all the three new Books (mostly identical or similar in all Books). Such new provisions that favour the Contractor include the following:

1. The Employer is required to submit "within 28 days after receiving any request from the Contractor, reasonable evidence that financial arrangements have been made and are being maintained which will enable the Employer to pay the Contract Price" in accordance with the Contract. "If the Employer intends to make any material change to his financial arrangements" he is required to give notice to the Contractor with detailed particulars. [Sub-Clause 2.4].
2. If the Employer considers himself to be entitled to any payment under or in connection with the Contract, and/or to any extension of the Defects Notification Period (the new more correct name for the Defects Liability Period), he must "give notice and particulars" to the Contractor. The particulars must "specify the Clause or other basis of the claim, and shall include substantiation of the amount and/or extension to which the Employer considers himself to be entitled". The notice shall be given "as soon as practicable after the Employer became aware of the event or circumstances giving rise to the claim". The Employer is expressly denied the right "to set off against or make any deduction from an amount due to the Contractor, or to otherwise claim against the Contractor" except in accordance with this provision. [Sub-Clause 2.5].
3. The Contractor's right to adjustment of the Contract Price to take account of any increase or decrease of Cost (as defined) resulting from a change in law in the country where the site is located has been extended (beyond "changes in legislation", as in e.g. the Orange Book) to include changes "in the judicial or official governmental interpretation" of laws made after the Base Date (as defined), which affect the Contractor in the performance of his obligations. [Sub-Clause 13.7].
4. If the Contractor is not paid on time, the Contractor is entitled to receive "financing charges compounded monthly on the amount unpaid during the period of delay". Unless otherwise stated in the Particular Conditions, these financing charges are to be calculated at the annual rate of three percentage points above the discount rate of the central bank in the country of the currency of payment, and should be paid in such currency. [Sub-Clause 14.8]. This provision is derived from the Orange Book. While the old Red Book provided that the Contractor was entitled to interest on late payments, it did not specify how this was to be calculated.
5. The Contractor is now entitled, after giving notice, to suspend or reduce the rate of work where the Employer fails to provide reasonable evidence of his

financial arrangements for paying the Contract Price (see point 1. above) or the Employer does not pay on time. [Sub-Clause 16.1]. Under the old Red Book [Sub-Clause 69.4], the Contractor was only entitled to suspend work or reduce the rate of work where the Employer was not paying an amount due under any certificate.

6. Within 42 days after receiving a claim or any further particulars supporting a previous claim, the Employer is now expressly required to "respond with approval, or with disapproval and detailed comments" [Sub-Clause 20.1]. Under the old Red Book, there was no express requirement that the Engineer or Employer respond to the Contractor's claim at all, except in the case of a dispute [Clause 67].
7. Under the General Conditions of the new Books for major works, disputes are now required to be submitted to a Dispute Adjudication Board (DAB) for decision. In the case of the new Red Book, the DAB must be appointed at the time the Contract is signed and remain in place until it is concluded. In the new Yellow and the Silver Books, a DAB is appointed for each dispute and ordinarily only remains in office until that dispute is decided [Sub-Clause 20.2]. Under the old Red and Yellow Books, disputes had to be submitted to the Engineer for a decision, as a condition of arbitration. The provision of the DAB to replace the Engineer for the settlement of disputes may be the most favourable of the innovations of the new Books from the Contractor's point of view.

What the critics say

A preliminary comment can be made about the two articles mentioned above where both are in fact saying the same thing, but where the message is given in a totally different manner. The first article is written by A H Gaede, Jr, an American lawyer who for reasons of his own takes the contractor's position in a tirade against the Silver Book. Many of the comments are a repeat of early comments made by certain contractors when reviewing the Test Edition. As Mr Gaede is surely aware, there have been a number of modifications from the Test Editions, particularly to the Silver Book, in the First Editions, so some of his comments are no longer applicable. His article unfortunately does not seem to ask or consider why FIDIC has chosen certain wording or clauses, nor does he make any mention of the new clauses that benefit the contractors. His article is thus generally presented in a patently one-sided and adversarial manner. Surprisingly, for a lawyer, he also virtually ignores or overlooks FIDIC's cautionary statements about the unsuitability of the Silver Book for use under certain circumstances. He also rather grandly talks about 'the best interests of the project'. When doctors or psychologists talk about 'the best interests of the child', it is easy to understand what is meant. It is not so easy to understand what is meant by 'the best interests of the project'. What is usually meant is 'the best interests' of the party making the remark.

It is possible that such a one-sided presentation defeats the object of the exercise, which is clearly 'do not use the Silver Book'. In other words, such an article might just encourage some to choose this Book on the grounds that if contractors say it is 'anti-contractor' then it surely must be 'pro-employer'. Despite its one-sidedness the article voices a number of definite worries for contractors, and the author will try to address these.

The second article introduced by Frank Kennedy reproduces word for word the EIC Contractors' Guide to the Silver Book. FIDIC does have some comments on this document, but generally it is an excellent competent guide bringing the attention of contractors - and others - to the matters that should be thoroughly considered before

embarking on a contract based on the Silver Book (and, to a large extent, on the New Yellow Book). These are probably the points that members of FIDIC's Task Group would point out if asked what should be considered by a contractor – and, indeed by an employer and others concerned – before such a contract is entered into. The message of the Guide is 'consider all these matters thoroughly *before* the contract is signed – not after'. If FIDIC has any particular message, it is also just this, that the parties – not only regarding the Silver Book, but for all contracts - should consider *all aspects, matters and risks before signing the contract* (rather than after, when it is usually too late). To the author, one matter that is definitely 'in the best interests of the project' is that misunderstandings and disputes are avoided, and the best way to do this is to consider all aspects and risks, and agree upon them, *before* entering into the contract. Only then can both sides go into the contract with their eyes wide open. Then, and only then, will there be a reduction in the necessity for claims and consequent adversarial attitudes, 'in the best interest of the project'.

Therefore, FIDIC is all in favour of the EIC Contractor's Guide, which FIDIC in general considers to be a positive approach in the current 'partnering' philosophy. FIDIC therefore hopes and recommends that all parties considering entering a contract based on the Silver and even the New Yellow Book will consult this Guide and consider – and where possible discuss with the other party - the points made there, before signing the contract.

Some replies to Mr Gaede's article

The title of Mr Gaede's article describes the Silver Book as being 'an unfortunate shift from FIDIC's tradition of being evenhanded and of focusing on the best interests of the project'. The reasons for this shift in this standard form have been described above, and, as mentioned, FIDIC would agree that the market demand for this shift probably is unfortunate. Regarding 'the best interests of the project', FIDIC believes that publication of this Book is 'in the best interests of the project' (as already mentioned) in that it brings out into the open the actual risks that the contractors are required to take.

Early in his article Mr Gaede asks 'why there are now three design-build forms' – i.e. the Silver Book, the New Yellow Book and the Orange Book, which is a matter that seems to be troubling some others as well. The reasons and difference in use for the Silver Book versus the New Yellow Book should be clear from what has been said above. The Orange Book (and the Old Yellow Book), however, should now be considered as superseded. FIDIC would prefer to produce updates of its standard forms at intervals of not less than 10 years. Thus the Orange Book from 1995 is an exception. However, FIDIC makes no apology for the Orange Book, which was an important and needed step at that time, and has contributed greatly towards the development of the New Books. In passing it can be noted that FIDIC will not be withdrawing the Old Red, Old Yellow or Orange Books as long as there is still a demand for them, and experience has shown that superseded editions of the FIDIC standard forms continue to be used by some for many years after the new editions have been introduced.

Mr Gaede then talks about 'the real world' stating that employers and financiers 'desire certainty, but rarely are they willing to pay more' for such certainty. Clearly, the more risks a contractor is required to bear, the higher the 'premium' a prudent contractor must add to his price to cover his extra risk-taking. Just as clearly, the employer – particularly if he is a relatively inexperienced employer – will pretend that he should not pay more for the contractor's increased risk-taking. Perhaps that contractor could 'educate' that employer by offering two prices, one with the premium for the extra risks, and the other with the employer taking those risks himself. In any case, the

difficulties of price bargaining cannot be blamed on FIDIC.

It may also be pointed out that in the BOT type of projects the contractor is usually an important member of the sponsoring organization and a shareholder of the project company, which is the employer. Therefore he is usually well placed to make his own views known and to ensure that they are taken into account. For example, in the case of the Channel Tunnel project, it is apparently well known that the initial construction contract was found to be so favourable to the contractor that part of the way through the project it had to be renegotiated and revised at the insistence of the banks. As a practical matter in these projects, the only really effective constraints on the views of the contractor in relation to the construction contract are the views of the lenders, who typically know little about construction, except to the extent that they may have had the foresight to engage engineers or lawyers experienced in construction matters to advise them.

In general contractors appear to have two major complaints about the Silver Book. The first is, of course, that more risk is passed to the contractor, and the second is that the employer has too much chance to interfere with the contractor's work. However, contractors do say that they are not unwilling to accept the greater risk, but it must be coupled to assured freedom from interference by the employer. Mr Gaede concurs with this viewpoint and under his 'Section 1' he discusses 'Provisions which give control and/or right to interfere to the Employer'.

General design obligations

Mr Gaede starts his analysis with Sub-Clause 5.1 and states "Why the authors of the Silver Book elected to place the risk of the Employer's design errors on the Contractor is not clear". The explanation lies in the basic purpose of a project designed by the contractor, which is to provide a project that works, that functions, that provides what is required, that is fit for its purpose. The employer has the idea, say he wants a factory to provide bottle tops. He knows that he has a market and something about the materials required, etc., but probably little about the manufacturing details. It is the contractor who has the know-how, and has the experience. Employers on many turnkey projects know relatively little about the technicalities of equipment manufacture, supply and construction; they may be businessmen, government officials, financiers, developers, etc. It is the contractors, suppliers or manufacturers who know the technicalities, the process engineering, and so on. Therefore it is necessary for the contractor to take over responsibility for the design criteria, the calculations, and all other matters necessary to ensure a final bottle top factory performing fit for its purpose. The employer prepares his 'Employer's Requirements' to whatever degree of detail suits him (often merely a performance specification), but it is then essential on a turnkey project for the contractor to check all basic data and other necessary information, and take over responsibility for it before work commences.

Here there is a fundamental difference between the Plant and Design-Build Contract (the New Yellow Book) and the EPC/Turnkey Contract (the Silver Book). For the New Yellow Book the traditional tendering procedures apply, with minimal (if any) negotiations before contract signature. Here tenderers study all relevant data provided by the employer and obtain 'all necessary information as to risks, contingencies and other circumstances which may influence or affect the Tender or Works'.. *'to the extent which was practicable (taking account of cost and time)'*, before submitting their tenders. The Contract is then awarded, usually on the basis of the lowest evaluated tender. *After Contract signature*, the Contractor is then allowed a period – stipulated in the Appendix to Tender – wherein he 'shall scrutinise the Employer's Requirements (including design criteria and calculation, if any) ..'. He shall then, within this period,

‘give notice of any error, fault or other defect found in the Employer’s Requirements ...’. If such error etc is found, which should not have been discovered before tender submittal, then a variation will be awarded.

For the Silver Book, on the other hand, the intention is that all matters which could cause a change in price shall be settled *before* Contract signature. The traditional tendering procedure does not apply. Time and opportunity has to be allowed before Contract signature for the short-listed or ‘preferred bidder(s)’ to examine and find out everything necessary. Therefore the Employer makes available all relevant data prior to the ‘Base Date’ and ‘the Contractor shall be responsible for verifying and interpreting all such data’. Also, except for certain significant stipulated portions of the Employer’s Requirements, ‘the Employer shall have no responsibility for the accuracy, sufficiency or completeness of such data’.

Consequently, the Contractor must be in the position to guarantee fitness for purpose, which means he must have found out all necessary information and data, and have fully scrutinised and understood the Employer’s Requirements, *before the Contract is signed*. This is reflected in Sub-Clause 5.1 of the Silver Book.

The said sub-clause then specifies what portions of the Employer’s Requirements and for what data and information the Employer shall retain responsibility.

Interference by Employer

Returning to the question of chances for interference by the Employer, Mr Gaede then discusses a number of sub-clauses which he feels could permit the Employer to ‘micro-manage’ the project, as he puts it; in other words could interfere with the freedom of the Contractor such that ‘the Contractor – designer, builder, operator – has lost the nearly total control which a true design-build contractor should have’. It has to be said that in general Mr Gaede’s comments are an over-dramatisation, and mostly one-sided. We all know how an aggressive lawyer at his provocative best can raise doubts and pick holes in almost any contract. However, these comments are more like a noisy salvo blasted from the hip, with more noise than accuracy; they mostly do not stand scrutiny. A couple of examples:

Mr Gaede says, "The Employer and the Employer’s Representative (if so authorised) may make determinations (Sub-Clause 3.5) and issue instructions (Sub-Clause 3.4) and the Contractor is obliged to comply". Why mix determinations and instructions – two separate subjects – in this manner? Anyway, it is believed he is trying to point out that employer’s instructions can be interference. Instead of giving a one-sided, incorrect emphasis, why does he not give the whole quotation? This reads, "The Employer may issue to the Contractor instructions which may be necessary for the Contractor to perform his obligations under the Contract. Each instruction shall ... state the obligations to which it relates and the Sub-Clause (or other term of the Contract) in which the obligations are specified. If any such instruction constitutes a Variation, Clause 13 [Variations and Adjustments] shall apply." It is perfectly reasonable that employers may have on occasion to give instructions to the contractor necessary for him to perform his obligations, and therefore it is necessary that this is provided for in the contract conditions. The sub-clause has been drafted to exclude as far as possible non-contractual or interference-type instructions.

Mr Gaede continues, "It should be noted on a BOT project, cost to the Contractor can be incurred during the operations phase so a determination by the Employer to save construction costs can impact adversely on operation costs." Presumably Mr Gaede means ‘an *instruction* by the Employer to save construction costs’; but on a BOT

project, where the Contractor is providing the financing, doing the construction, and operating the project for a number of years, why would the Employer be instructing or determining a saving on the construction costs?

Irrespective of Mr Gaede's comments, it is well known and understood by FIDIC and the Task Group that unnecessary and unfair interference by the employer in any turnkey type project (and, indeed, other projects) can have serious financial, time and other consequences on the contractor. This was one of several points discussed in the frequent meetings between the Task Group and several organisations, including the European International Contractors (EIC), both before and after the production of the Test Edition of the Silver Book. This author and several other members of the Task Group have experience of employers (not only on construction contracts, but also on consultant contracts) who have unfairly interfered with, and tried to control and direct the work of the contractors (or consultants). Such an employer has typically engaged a large staff of engineers or inspectors who have been given instructions to check in detail every aspect of the contractor's (or consultant's) work. We have seen such staff demand more and more copies of, for example, detailed calculations, which they have then merely put on the shelf, while they demand further details. Such unfair behaviour can, in itself, cost the unfortunate contractor a great deal of unexpected expense, but, even more serious, may be the cause of time delays.

However, the opposite situation is equally undesirable, where the employer has no control at all over his contractor, or how that contractor behaves or misbehaves while carrying out the work. To use Mr Gaede's words, in a contractor's 'wish-it-were-so' world the employer would sign the turnkey contract with the contractor – say, a two-year construction time – and then disappear. He would return at the end of the two years, receive the 'key' of the completed bottle-top factory, and turn the key to start up production of his bottle-tops. Unfortunately in the real world 'it ain't so'. The employer might, for example, turn up after the two years to find a half-finished factory, or even no factory at all.

Thus, the art is to find the middle way. The employer needs to know several things. After all, it is his project, and (usually) his money. He has to know that the work is progressing according to time schedule, and be assured it will be satisfactorily completed on time. This is also important so that part payments match work completed. He has to be assured that the quality of the work is as specified. This might be less important in BOT projects where the Contractor will operate the project, but is most important in traditional turnkey projects where the employer takes over the facility on completion of construction. The employer owns or leases the site, and therefore must be assured that work on his site is not causing nuisance or danger to neighbours. He cannot, for example, allow his contractor to work 24 hours per day on a site in the middle of a city, or cause unreasonable dust or other pollution, or neglect public safety. The employer also must be assured that quality and performance tests are carried out satisfactorily, and generally that all that he has stipulated in his 'Employer's Requirements', and that is specified in the Conditions of Contract and elsewhere in the Contract, are being complied with.

The Task Group feels that the sub-clauses included in the Silver Book reflect this balance of necessary employer involvement versus contractor freedom, for the majority of traditional and even BOT-type turnkey projects. However, as always, the parties should look at every requirement before signing a contract, and if any of the sub-clauses appear to be unnecessary or particularly onerous on the contractor they can be simply deleted or deactivated. If any contractor (or consultant!) suspects that an employer is intending to be over-ambitious in his supervision of the contractor's work

or otherwise likely to interfere unnecessarily, then that contractor would be wise to take suitable precautionary action before signing the contract. FIDIC has stated clearly in the 'Introductory Note' to the Silver Book that the Book "is not suitable for use... if the Employer intends to supervise closely or control the Contractor's work, or to review most of the construction drawings". FIDIC, as always, unfortunately cannot prevent parties using its standard forms in circumstances for which they are not intended. However, the circumstances where the Silver Book is not suitable are stated prominently in the publication, and can – where necessary – be brought to the attention of a recalcitrant party.

Unforeseen ground conditions

Under Section 2 of his article, Mr Gaede gives us 7 pages of complaint and discussion about the question of who should bear the risk of unforeseen ground conditions in BOT projects. Perhaps it is of minor importance that the section is written in a somewhat cavalier fashion, and with a number of obvious careless errors. For example, on mid-page 486 he writes, "Under the German concept, the risk was not placed on the owner because the owner normally provides the design. Under the German concept, the owner has the risk because it controls and provides the site." And on page 490 he says that the Contractor can claim Cost under Sub-Clause 19.4 (relating to Force Majeure) for adverse ground conditions, when this is clearly not the case, as recovery of Cost under Sub-Clause 19.4 is limited generally to war and war-like events.

However, what is more disturbing than the obvious errors is the insistence throughout the article that the Silver Book unreservedly places the risk of unforeseen ground conditions on the Contractor. This is a serious misrepresentation.

Let us be reminded of what has been said above, that the Silver Book is intended to be used for all types and sizes of turnkey projects where employers wish greater security of final price, a two-party system, and so on. Certainly it may be suitable (at least, as a starting point) for EPC Contracts within a BOT or similar type venture, but the majority of projects probably will be turnkey electrical and mechanical, and other process plant type of projects. Let us take our bottle-top factory, or a diesel plant for generating electricity. The factory or the generating plant is going to be erected on a site in an industrial estate, or out in the desert, or even in the middle of a town. Many other buildings have been erected in the industrial estate so the ground conditions are well known. Similarly for the desert site, the ground conditions are almost certain, particularly as both the factory and the diesel plant only require simple foundations. Even in the town, the underground conditions are rather well known; there is certainly going to be a number of cables, sewer pipes and other services. So in none of these cases is there much risk of unforeseen ground conditions. The Task Group believes that in the majority of the projects for which the Silver Book will be used the risk of unforeseen ground conditions will be small, and often will be insignificant in relation to the many other, more serious risks that the turnkey contractor will anyway be taking.

Mr Gaede seems to have forgotten this majority of projects for which the Silver Book may be used. He refers only to BOT projects, which seems to be where his interest lies. But even in the context of BOT projects he states, "Other risks on BOT projects include technology risk (both in the sense that the proposed technology will not work or the new technology will be developed), supply risk (the price of coal escalates so cost to produce power increases), and customer risk (gas prices increase and result in reduced traffic on toll road), etc." Even on many BOT projects the risk of unforeseen ground conditions may be minimal compared to the other risks.

Therefore, the Task Group believes that the great outcry about the risk of unforeseen

ground conditions is exaggerated and misplaced. Having, as pragmatic engineers, said this, the Task Group firmly believes, and has stated and repeated as distinctly as possible, that the Silver Book, without suitable modification, is not suitable for projects 'If construction will involve substantial work underground or work in other areas which tenderers cannot inspect'. The Introductory Note to the Silver Book also says clearly that the Book is not suitable 'If there is insufficient time or information for tenderers to scrutinise and check the Employer's Requirements or for them to carry out their designs, risk assessment studies and estimating (taking particular account of Sub-Clauses 4.12 and 5.1)'. It goes on to say 'FIDIC recommends that the Conditions of Contract for Plant and Design-Build should be used in the above circumstances for Works designed by (or on behalf of) the Contractor.'

We regret that Mr Gaede, as a lawyer, did not first note and weigh these cautionary statements before embarking on his analysis, because misrepresenting FIDIC's viewpoint on this matter benefits no-one. Mr Gaede concludes this Section of his article with some suggestions as to how a contractor who has signed a contract based on the unmodified conditions of the Silver Book, and who encounters serious unforeseen ground conditions, might yet be able to recover the financial (and time) consequences. It, of course, would have been better if that contractor had insisted on the modifications FIDIC recommends before entering the contract.

The Dispute Adjudication Board

In Section 3 of Mr Gaede's article he criticises several aspects of the DAB provisions of the Silver Book. His main concern is – as is currently being discussed by other commentators – that this Book provides for an *ad-hoc* DAB instead of a permanent or 'standing' DAB as in the Construction Book. Unfortunately he again has misunderstood the flexibility which is one of the main features of this new suite of Books. FIDIC intends that, on projects where a standing DAB is more appropriate, such shall be specified. On page 21 of the Guidance for the Preparation of the Particular Conditions is written, "However, for certain types of projects, particularly those involving extensive work on Site, where it would be appropriate for the DAB to visit the Site on a regular basis, it may be decided to retain the services of a permanent DAB. In this case, Sub-Clauses 20.2 and 20.4 together with the Appendix and Annex to the General Conditions, and the Dispute Adjudication Agreement, should be amended to comply with the corresponding wording contained in FIDIC's Conditions of Contract for Construction".

FIDIC is definitely in agreement with most of what is said regarding the merits of a standing DAB, appointed at the commencement of the Contract, visiting the Site at regular intervals, and often managing to assist the parties to reach agreement on contentious matters at an early informal stage. It is probably correct to say that the majority of construction disputes refer to works being carried out at site. If the project involves extensive works on site, FIDIC recommends a standing DAB, as is provided for in the New Red Book.

However, when the majority of the work is carried out elsewhere, e.g. at the manufacturers, which is probably the case for the *majority* of projects carried out under the Plant and Design-Build (New Yellow) and the EPC/Turnkey (Silver) Books, then the ad hoc DAB is proposed. Thus FIDIC has both alternatives, and it is expected that those preparing a contract will consider which alternative is most suitable for their particular project, and use that alternative.

Why has the Task Group chosen the ad hoc variant for the New Yellow and Silver Books? As pointed out earlier, one of the problems of preparing standard forms is that

they should be suitable for projects of all sizes and complexity. Mr Gaede and the other critics seem to have in mind only the large or very large projects where the cost of the DAB is not a particularly daunting factor in the overall financial picture. However, the costs and difficulties of setting up and paying a DAB are considerable. The only persons who are suitable to be on a DAB are well qualified and experienced senior professionals, and such persons are only available against high fees. To this must be added the costs of travel and accommodation. Also to be considered is the parties' senior staff time that must be devoted to the DAB in connection with each visit. Parties entering into contracts have obviously to weigh up the costs of the DAB against the likelihood of serious disputes and the probable benefits of the DAB's work.

As has been mentioned, it is believed that the majority of projects using the New Yellow or the Silver Book will be for the manufacture and subsequent erection of plant of all types. There certainly will be projects where construction at site is the dominant feature, but the *majority* of projects are expected to be in the middle size range, where the manufacture (and transport) off-site will be the dominant undertaking. The period for manufacture and other off-site activities will probably be much longer than the erection period at site. For our example of the bottle-top manufacturing plant, perhaps the time from contract signature until delivery to site might be 18 months to 2 years. Construction of foundations and erection of the plant and prefabricated building at the site might typically be only the last 6 months. Perhaps the chances of serious dispute are also considered fair.

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