

EPC Contracts

Controlling cost blowouts on mining developments

By Jonathan Hosie



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The world of mining in 2015 is a challenging one for those looking to bring projects into development. Deflated commodity prices and fragile investor confidence mean that only the most robust projects are likely to make the investment case.

There is no shortage of money, with investment funds seeking good rates of return and many mining projects offering the prospect of delivering such returns, sometimes at eye-watering levels. Most commentators would also agree that projects with good quality assets, managed by an experienced team are two prerequisites for convincing investors to make the all-important decision. However, when assembling a development proposition and advancing along the road towards project development, investors and lenders alike need to have confidence that management has an achievable plan and can deliver against that plan. That includes demonstrating a coherent approach to project management of the development phase, once the economic case has been verified through pre-feasibility and bankable feasibility studies.

A key component of any such development is controlling the costs of bringing the mine into production. Whilst the market dictates the commodity price for the eventual production output, what developers ought to be able to control is the development cost.

Traditionally, the international market for mine developments has promoted the use of the EPCM¹ model to organise the diverse resources that are often entailed in a mine development. However, the problem with the EPCM model is that it is a consultancy agreement, not a hard-edged delivery mechanism. The EPCM contractor will not, in the event of a cost blow-out, underwrite that risk. While the completion risks are carried by the individual suppliers of specialised plant and sometimes by the construction contractors undertaking the infrastructure work elements, there is no one party with overall responsibility for ensuring that the project is delivered within budget and on time. That is, no one party other than the project sponsor itself. That is a big risk to carry for any party but more so where the sponsor may be a single project company with limited assets beyond the project itself.

In the brave new mining world of 2015 and beyond, perhaps the market needs to reassess the EPCM approach and look instead to hard-edged EPC contracts to successfully deliver projects. This is arguably a better way to manage and avoid the well publicised cost blow-outs that have beset some major mining developments in recent times.

The two articles that follow examine the use and some of the features of EPC contracts and in particular those produced by FIDIC². Under the EPC model, the risk of completing the project within budget and on time are allocated to the contractor, who retains single-point responsibility if those metrics are not met. This model makes it easier for the developer to assure equity investors and debt providers that the capital budget and the expected date for production will be met.

Mayer Brown has a wealth of experience in this area.³

¹ Engineer Procure Construction Management.

² Fédération Internationale Des Ingénieurs-Conseils.

³ in January 2015, the firm was awarded Project Finance Group Of The Year by Law360. This prestigious award recognized the work of the firm in representing companies and government bodies in major infrastructure financing deals around the world from several North American and South American infrastructure projects to mining projects in Africa, designing innovative and unique financing deals to meet the specific needs of each project.

Turnkey contracting under the
FIDIC Silver Book: What do
owners want? What do they get?



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Turnkey contracting under the FIDIC Silver Book: What do owners want? What do they get?

Jonathan Hosie¹

Introduction

This paper concerns turnkey contracting and asks the questions ‘What do owners want? What do they get?’ The analysis is given a contractual setting by reference to the *Conditions of Contract for EPC Turnkey Projects* published by FIDIC, otherwise known as the Silver Book.² Reference was also made to the ICC Model Contract when this paper was first planned, though the ICC’s new Model Contract for Major Projects has not yet (August 2007) been published.³

The FIDIC Silver Book was produced in 1999, in response to a perceived need for a form of contract ‘where certainty of final price, and often of completion date, are of extreme importance’.⁴ Its publishers also recognised that turnkey projects are popular in project financed deals, where lenders require greater certainty about a project’s final costs than is allowed for under contracts that reflect the traditional allocation of risks, such as FIDIC’s Red and Yellow Books.⁵

The introductory notes to the Silver Book further recognised the practice that prevailed prior to its publication, namely for parties to take the pre-1999 versions of the FIDIC Red or Yellow Books and alter these in order to transfer significant additional risks to the contractor, in an attempt to obtain a higher level of assurance as to outturn cost, quality and time.

This paper looks at some aspects of turnkey contracting at the macro level and, in terms of specific features of the FIDIC Silver Book, at certain issues at the micro level. The thesis developed is that owners do not get the turnkey solution they want. This is primarily because a turnkey solution is not as simple as it sounds, due to the inevitable complexities of large projects and the decreased risk appetite of contractors in the global projects arena. There is a shortfall between expectation and actuality in many of the FIDIC provisions, which means that the appearance of risk transfer to the contractor is not as complete as might be suggested by FIDIC’s use of the term ‘Turnkey’ to describe the Silver Book.

Turnkey contracting

The idea behind the turnkey approach is, putting it crudely, for the contractor to be given the job to engineer, procure and construct the required works and then, once ready for operations, to hand over the keys to the owner so that it may operate the facility. Turnkey, in principle, means a contract whereby the contractor provides whatever is necessary for a certain purpose.

¹ The views expressed in this paper are personal to the author and are not intended to be imputed to Mayer Brown International LLP or to any client of that firm.

² FIDIC (International Federation of Consulting Engineers), 1999 suite of standard forms (eg *Conditions of Contract for Construction* (new Red Book), *Conditions of Contract for Plant and Design-Build* (Yellow Book), *Conditions of Contract for EPC Turnkey Projects* (Silver Book)), obtainable via www.fidic.org. Direct quotations from the FIDIC Silver Book in this paper retain the formatting of the original.

³ The ICC Model Contract for the Turnkey Supply of an Industrial Plant was first published in 2003 (ICC Publication 653, obtainable from www.iccbooks.com). The ICC’s Task Force on turnkey transactions, under the Commission on Commercial Law and Practice (CLP), has drafted the ICC Model Turnkey Contract for Major Projects (due for publication later in 2007), designed to be more suitable for large civil works or for contracts for the supply of plant, where the contractor undertakes to supply a complete facility.

⁴ Introductory note to First Edition of FIDIC Silver Book (see note 2).

⁵ See note 2.

Turnkey contracting is sometimes also referred to as ‘Lump Sum Turnkey’ or ‘LSTK’, emphasising the intended bargain of the parties, with responsibilities allocated to the contractor to deliver the project on time and to a required performance level, in return for payment of a fixed price. A lump sum turnkey price will include contingency allowances to hedge against the risk of things costing more or taking longer to deliver. Owners expect to pay a premium for a turnkey contract.⁶

Another acronym seen frequently in this context is EPC: ‘Engineer, Procure and Construct’. Thus, an EPC contractor is responsible for the engineering design of the works, its procurement and subsequent construction.⁷ Indeed, the Silver Book’s full title is ‘Conditions of Contract for EPC Turnkey Projects’. Thus it uses the terms EPC and turnkey interchangeably, meaning the same thing.

A feature of the turnkey approach to contracting, including revenue-generating facilities, is the requirement for the contractor to prove the reliability and performance of the plant and equipment. Thus particular prominence is given in the drafting of turnkey contracts to the testing, commissioning and handover of the works and how this is to be undertaken. Such approaches are common in process engineering projects, where the output may be energy generation, water treatment, petrochemicals or natural resource processing (mining). It is of critical importance in such projects not only for the project to be delivered within time and cost constraints but also to be delivered so that it is capable of meeting its designed production and output levels.

Performance of the asset is particularly key in those turnkey projects funded through project financing. Lenders’ security is dependent largely on the ability of the completed facility to operate and generate revenue, whether power, chemicals, processed metals or road toll revenue. This prominence is reflected in the General Conditions of the FIDIC Silver Book: the ‘Time for Completion’ of the works includes not simply completing the works so that the owner can take them over, but also ‘achieving the passing of the Tests on Completion’.⁸

Against this background, we can start to ask (and suggest some answers to the question): ‘What do owners want?’

Projects have a large number of moving parts

A point worth stressing at the outset is perhaps obvious, but nonetheless important. This is the fact that a turnkey contract will be but one part of the contractual framework and one component of the risk management arrangements and contractual framework used on large projects. Thus, the extent to which risk is allocated to the contractor under turnkey arrangements will depend upon a range of other factors, including the availability and strengths of guarantees from the project’s sponsors. Where a sponsor will not provide any, or only a limited form of, completion guarantee to lenders, this obviously increases the need to allocate completion risk away from the sponsor. In these circumstances, the obvious candidate for the risk, given that it will be in the best position to manage it, will be the turnkey contractor. The turnkey contract is the means by which the risk is allocated.

A linked point is that projects commonly require a range of skills and products which are not always available from a single turnkey contractor. By way of example, large petrochemical projects may have a series of turnkey contracts for various technologies represented by different process units, plus an infrastructure or utilities turnkey contract. Each process unit will be engineered, procured and constructed by a different turnkey contractor, working alongside each other albeit within the site locations or ‘battery limits’ of their respective process plants.⁹

⁶ However, it is increasingly common for turnkey contracting to be based on, or involve, an initial cost reimbursable or target cost element. See also notes 7 and 12.

⁷ The acronym ‘EPCM’ is also encountered frequently on international projects, but this is very different from EPC. EPCM is a services-only contract, under which the contractor performs engineering, procurement and construction management services.

⁸ Clause 8.2 of the FIDIC Silver Book (see note 2).

⁹ For the US\$5bn SABIC petrochemical project in Saudi Arabia, turnkey contracts were entered into for various plants forming the project, including Technip for the olefins plant; Toyo for the glycol ethylene plant; Aker Kvaerner and Sinopec for the polyethylene and polypropylene plants; and Foster Wheeler who are undertaking the project management plus utilities and offsites.

The key risk in any construction project is *completion risk* – that the works may not be completed:

- 1 Within the agreed lump sum price; or
- 2 Within the agreed time scale programme; or
- 3 To the required performance quality.

In a turnkey arrangement, it is the contractor who has responsibility for and control over (at least in theory) each of these elements of completion risk. However, even at this fairly fundamental level, difficulties can be encountered depending upon the sources of information that make up the design for certain plants which may threaten the intended turnkey product the owner is procuring.

The idea that turnkey contracting provides the owner (and its lenders) with single-point responsibility is attractive, because it suggests that costly disputes and recourse difficulties when something goes wrong will not be increased by arguments within the supply chain as to who may be at fault. However, and as noted above, large projects will frequently involve a number of turnkey contractors undertaking different parts of the overall project, each according to its own specialist skills.

Further potential for interface clashes (and additional erosion of the single-point responsibility quality that owners expect from a turnkey solution) arises where a plant contains one party's proprietary technology but is otherwise delivered by another contractor. In these circumstances the so-called 'turnkey' contractor will not necessarily be willing to provide the full wrap in terms of assuring the outturn performance of the plant. This can be seen particularly in the petrochemical sector, where process units often involve the use of technology owned and licensed by third parties. If the third party company which owns the technology licence is not the same company that undertakes the works under turnkey terms, there is an obvious difficulty in obtaining a single-point responsibility wrap under one contract from one EPC contractor.¹⁰

Impact of an over-heated market

Another factor that militates against some of the perceived advantages of turnkey contracting is that of market pressure. At the time of delivering this paper, it is probably no exaggeration to state that the global construction economy is overheating. Demand for construction goods and services is high, driven particularly by the industrialised growth of large economies in both the People's Republic of China and in India.

This demand (and the high price of crude oil) is also driving the further exploitation of raw materials and processed goods. Thus, the mining sector has, over the last 18 months, enjoyed a significant resurgence, which has led to a large number of new and old reserves being developed. Equally, petrochemical companies have seen a series of mega-projects in areas close to feed stock supplies in the Middle East, as global construction activity drives the demand for products such as polyethylene, polypropylene and other processed carbon derivatives.¹¹

These market pressures are having a big impact on the risk appetite of the turnkey contracting market (as well as on prices and programmes, as the entire supply chain feels the strain of excess demand). In particular, the decreased appetite for risk amongst contractors means that it is no longer a feasible procurement strategy to transfer all completion and other risks to the turnkey contractor. Different sorts of deals are being engineered, notably ones where contractors are engaged effectively on a two-stage basis, the first stage being a reimbursable Front End Engineering Design ('FEED') contract. During this stage, the contractor undertakes its design, obtains firm vendor quotations, may even place orders for certain long lead equipment and generally firms up on the scope of supply. When the contractor can be sufficiently certain as to the scope of design and expected outturn cost and date for completion, such matters may then be fixed as the contract is 'converted' into an LSTK or turnkey arrangement.¹²

¹⁰ The turnkey contractor will likely seek to carve out from its liability problems arising due to technology performance, or to cap its liability by reference to the recourse available from the technology provider.

¹¹ Plastics & Rubber Weekly (3rd February 2007 and 22nd May 2007 – see www.prw.com) reported that Nova Innovene will de-bottleneck all its expandable polystyrene (EPS) production units in Europe to boost output, and will increase its production capacity. Demand for this product is expanding, driven by the buoyant construction market.

¹² For a more in-depth look at such procurement strategies, see Nick Henchie and Phil Loots, 'Worlds Apart: EPC and EPCM contracts: Risk Issues and Allocation', ICLR July 2007.

Such arrangements may be engineered through a single contract, which contains a mechanism to convert the contract from a reimbursable to a fixed LSTK basis. Alternatively, owners and their preferred contractors may enter into a separate FEED or Preliminary Engineering contract which, once completed, can form the basis of the parties entering full EPC terms. However, in the latter case owners will seek to find some enforceable mechanism to help ensure that the contractor will enter into the LSTK arrangement (with all its attendant risks). The risk for the owner otherwise is that its preferred contractor seeks to re-negotiate underlying terms and conditions under the full EPC contract to reduce its overall risk.

A scoresheet for the FIDIC Silver Book

Against the background of all these issues, it may be instructive to see how the FIDIC Silver Book Conditions deal with such matters. As a general rule, FIDIC discourages amendments to its forms. However, market practice (for better or for worse) is to amend these documents to cater for issues which commonly arise in practice and, of course, to take account of the particular features of each project.

Rather than a review of the entire provisions of the FIDIC Silver Book, this paper proposes to concentrate on a number of key areas. First to be considered will be how unforeseen ground conditions are dealt with. The second is how design liability risks are addressed. Also reviewed are the arrangements for testing, completion and taking over of the plant. The analysis will conclude with a review of force majeure, limitation on liability and extensions of time provisions.

This analysis establishes that there is probably a shortfall between expectation and actuality when the FIDIC Silver Book is used. Risk is not fully transferred to the contractor (absent further amendment to the contract conditions). Overall, this analysis bears out the proposition that owners who opt for the turnkey approach using the FIDIC Silver Book do not get what they want.

Unforeseen ground conditions¹³

The approach taken by standard forms of engineering contract to unforeseen ground conditions has, traditionally, been to adopt a test of foreseeability. Thus, clause 12 of the ICE Conditions provides:

‘If during the carrying out of the Works the Contractor encounters physical conditions (other than weather conditions or conditions due to weather conditions) or artificial obstructions which conditions or obstructions could not, in his opinion, reasonably have been foreseen by an experienced contract, the Contractor shall as early as practicable give written notice thereof to the Employer’s Representative.’¹⁴

The FIDIC forms were originally based on the ICE Conditions of Contract.¹⁵ Thus, it is not surprising that under the FIDIC Red and Yellow Books this traditional foreseeability test is applied. Clause 4.10 of those FIDIC forms requires the employer to have made available all relevant data in his possession on sub-surface conditions, not later than 28 days prior to the submission of the tender. Clause 4.11(b) then dictates that the contractor is deemed to have based the contract amount on such data. The owner warrants the accuracy of the information he has provided and the contractor is only responsible for interpreting the data. Further, under the FIDIC Red and Yellow Books the contractor is deemed to have obtained all necessary information as to risks which may influence or effect his tender for the works. He is also deemed to have inspected and examined the site and other available information. However, these deeming provisions are limited to the extent that the investigation by the contractor is practicable, taking into account cost and time.

On the allocation of risk for unforeseen ground conditions, the FIDIC Red and Yellow Books thus adopt the ICE clause 12 approach: the owner carries the risk of physical conditions which could not have reasonably been foreseen by an experienced contractor at the date of tender.

¹³ See also Julian Bailey, ‘What Lies beneath: Site Conditions and Contract Risk’ (SCL paper 137, May 2007).

¹⁴ Institution of Civil Engineers, ICE Conditions of Contract 7th ed (ICE7), Design and Construct version, London, ICE/Thomas Telford (2001).

¹⁵ Indeed, further editions of the FIDIC forms have followed later editions of the ICE forms and vice versa. As Edward Corbett notes in the introduction to his book, FIDIC 4th: A Practical Legal Guide, London, Sweet & Maxwell (1991), the drafting of FIDIC’s 4th edition of the Red Book was heavily influenced by the ICE’s 5th edition, after which the ICE’s own 6th edition adopted some of the innovations introduced by FIDIC’s 4th.

The FIDIC Silver Book, in keeping with its turnkey approach to risk allocation, takes this one important step further. Whilst the owner provides information to tendering contractors, it is the contractor who is responsible for verifying as well as interpreting that data. There is no warranty by the owner as to the sufficiency or completeness of the information provided. Under the FIDIC Silver Book, the risk of adverse ground conditions is intended to be allocated to the contractor. Clause 4.12(c) provides a catch-all statement to the effect that the contractor accepts responsibility for having foreseen all difficulties and costs, even those which are not foreseeable:

‘The Contract Price shall not be adjusted to take account of any unforeseen difficulties or costs.’

It will not be surprising to learn that, in practice, the provisions of the Silver Book are commonly subject to heavy negotiation between the parties. This is particularly so in the current global construction market, where contractors’ appetite for risk is much reduced by the sheer volume of work opportunities available to them. It is at this point that the expectation of owners that they will receive turnkey assurance starts to dissipate. This may occur in a variety of ways in relation to unforeseen ground conditions.

One device is simply to revert to the more traditional test of foreseeability so that the risk of the unforeseeable remains with the owner. Another is for the risk to be taken by the contractor but only after it has had ample opportunity to satisfy itself as to risks, contingencies and other circumstances concerning the site conditions. This would be commonly undertaken during the FEED stage, where testing is undertaken on a reimbursable basis (ie paid for by the owner), so that the contractor can take an informed view as to the likelihood of there being adverse ground conditions.

A further variant on this is to take the existence of ground condition reports and all the surveys and to use these to extrapolate assumed conditions. If variances are found in practice from the assumed conditions which affect time or cost, their impact is allocated back to the owner rather than transferred to the contractor.

Thus and in a number of ways, the global projects market finds ways around the standard form risk allocation represented by the FIDIC Silver Book conditions. Such approaches tend to ameliorate the rigidity of the turnkey solution: a number of risks remain with the owner.

Design liability

In the same way that unforeseen ground conditions may impact the certainty as to outturn of the contract price and time for completion, the issue of design liability can play a major role in determining the extent to which the turnkey solution is deliverable.

Again, and as noted in the introduction to this paper, turnkey arrangements necessarily suggest that the contractor is required to take full responsibility for the entirety of the design of the works. This will often be a point of contention, particularly where initial design work has been undertaken on behalf of the owner, with such designs being provided to the contractor during the tender stage with the requirement that it is to take on full responsibility for such design.

Numerous disputes arise in practice where there are changes in the design of the works following award of the contract. Such variations in design will be argued to give rise to relief for the contractor in terms of time and money entitlement. The counter-argument to this (in the case of changes in design) is to characterise the change as simply design development, which does not serve to increase the contractor’s entitlement to time or money. It may be instructive to consider the treatment under clause 5.1 of the FIDIC Silver Book, which addresses general design obligations:

‘The Contractor shall be deemed to have scrutinised, prior to the Base Date, the Employer’s Requirements (including design criteria and calculations, if any). The Contractor shall be responsible for the design of the Works and for the accuracy for such Employer’s Requirements (including design criteria and calculations), except as stated below.’

Having established this deemed universe where the contractor has scrutinised the owner's designs (presumably to verify and satisfy itself, although this is not stated explicitly),¹⁶ the FIDIC Silver Book pushes home the point further, clause 5.1 going on:

'The Employer shall not be responsible for any error, inaccuracy or omission of any kind in the Employer's Requirements as originally included in the Contract and shall not be deemed to have given any representation of accuracy or completeness of any data or information, except as stated below. Any data or information received by the Contractor, from the Employer or otherwise, shall not relieve the Contractor from his responsibility for the design and execution of the Works.'

The rest of the same clause then goes on to carve out from the matters for which the contractor is responsible a number of matters for which the owner retains responsibility; but the list is very limited in scope. Hence the approach of the FIDIC Silver Book is for the EPC/turnkey contractor to create a single design liability wrap around the project, with the contractor being responsible both for the integration of the design and the construction of the works.

However, in practice this risk allocation is frequently changed. Depending on the market, the change may be to increase the risk to the contractor; or to increase the extent of the carve-out in respect of liability for which the contractor is not liable, thereby decreasing the contractor's risk. Conversely, there may be other provisions in the contract, such as notes on drawings or process diagrams forming part of the employer's requirements, that indicate that the design has not yet been fixed and remains to be confirmed, say by the equipment vendors.

Owners may seek to tighten up and improve on such provisions by using devices seen elsewhere in the FIDIC Silver Book (as well as in the ICE forms), namely further deeming provisions. Thus, clauses that deal with the sufficiency of the contract price and all of the risks, contingencies and other factors that the contract is deemed to make allowance for, help ensure that the owner has an LSTK assurance from the contractor. The FIDIC Silver Book scores well in this aim.

Of course, it is a matter for negotiation on each project exactly how complete a full design liability wrap can be achieved. It may be, in a particularly soft market where contractors and equipment vendors are in short supply and high demand, that owners will face substantial resistance to their attempts to achieve the full wrap. Equally, such risk transfer may be agreed, provided the financial risk contingency for the obligation is sufficiently generous to persuade the contractor to take that risk.

At the macro level on large projects, one also sees that the contract structure adopted for delivery of the project also militates against the turnkey assurance. This is because, as previously noted, large projects will frequently be delivered by a number of different EPC/turnkey contractors. That creates interface issues, which means it is just not possible to have one EPC/turnkey contractor giving a single-point responsibility risk assurance wrap for the entire project.

¹⁶ In *Co-operative Insurance Society v Henry Boot (Scotland) Ltd* [2002] EWHC 1270 (TCC), 84 Con LR 164, 19 Const LJ 109, Judge Richard Seymour QC held that an obligation for a contractor to 'complete' the design provided by an owner necessarily imported a duty for the contractor (under the JCT80 contractor design supplement form) to use reasonable care to verify the adequacy of that design.

Handover, testing and commissioning

If one starts from the proposition that owners want an LSTK product, then that assumes that the owner allocates to the contractor control of the works up to the point at which the contractor hands over the keys. Is this realistic on projects for which the standard form FIDIC Silver Book is adopted?

In many cases, the owner does not want to wait to take over the plant (in the sense of having control) only after the plant is tested, commissioned, performance-tested and ready for start-up. Often the owner will in fact be an experienced operator of the plant. It will therefore want its own people operating the plant as soon as it is able. In the energy sector, it will want to start selling electricity as soon as it is being generated following commissioning, but often prior to performance testing. In the petrochemical sector, owners will want this level of control at the point at which hydrocarbons are introduced into the various systems making up a plant. For mining projects, the same applies in relation to the start-up and commissioning activities where ore enters the processing plant to be treated. Whether it is the generation of electric current or the introduction of the hydrocarbons or ore into the processing system, at this point the plant will simply be at the stage of testing and commissioning. The project will not yet have reached final completion and passed its performance tests.

How does the FIDIC Silver Book address the issue? The short answer is that it does not. The Silver Book simply moves through the stages whereby the plant is first engineered or designed (clause 5, *Design*), to how it is to be constructed (clause 7, *Plant, Materials and Workmanship*, and clause 8, *Commencement, Delays and Suspension*), then on to what would normally be mechanical completion (clause 9, *Tests on Completion*). It then deals with the process of handover to the owner (clause 10, *Employer's Taking Over*). Following this, the FIDIC Silver Book provides an option for further testing (clause 12, *Tests after Completion*).

The FIDIC Silver Book does not deal explicitly with the issue commonly encountered on many large projects: the need for provisions to reflect the pre-completion control required by the owner. The testing and commissioning of plant is always a risky enterprise: vessels and pipework are pressurised and 'hot' testing may be implemented. This is an important issue, because control brings with it responsibility and risk. This has contractual implications (eg possible triggering of warranty or defects liability provisions), as well as impacting on insurance coverage (signalling, potentially, the end of the contractor's All Risk cover and the commencement of the Operational or Business Interruption cover). This is another area where it is suggested that owners do not get what they want (absent amended provisions to deal with the issue).

Clause 17 (*Risk and Responsibility*) and clause 18 (*Insurance*) will also need careful review and likely revision in this regard. It is worth mentioning that clause 30 of MF/1 (*Use before taking-over*)¹⁷ recognises the possibility of early owner use of the works for commercial operation. This applies where, due to default of the contractor, issue of a taking-over certificate has been delayed by over one month but is subject to the works being 'reasonably capable of being used.'

In practice, the FIDIC Silver Book terms will often be subject to amendment to allow the owner's team to have control and commercial operation (but not responsibility), by providing expressly for such an apparent dichotomy. There will also be a need to provide some protection for the contractor. Balancing of interests can be achieved by allowing for the contractor to disclaim liability where the owner's team fail to act in accordance with the contractor's reasonable instructions.

¹⁷ Institution of Mechanical Engineers/Institution of Engineering and Technology, Model form of General Conditions of Contract (MF/1), 2000 Edition (Revision 4); obtainable via www.theiet.org/publishing/.

Force majeure

If turnkey means the allocation of risk to the contractor, then clause 19 of the FIDIC Silver Book (*Force majeure*) leaves the door open for that risk to migrate back to the owner. Indeed, in a sense, much of this risk never leaves the owner.

The impact of the risk of a *force majeure* occurrence receives a similar treatment across all FIDIC forms: both the time and cost impacts of such an event are allocated to the owner.¹⁸ I am not aware of any other standard form of construction contract that adopts this approach, other than the UK's Engineering and Construction Contract (otherwise known as the NEC).¹⁹ Most other standard form contracts allocate the time risk of the *force majeure* event to the owner, but leave the cost impact as neutral. Not so with FIDIC, even under the Silver Book.

The other point is that the FIDIC Silver Book's definition of what constitutes *force majeure* is wider than one might have expected, given the supposed turnkey qualities of this form. Whilst under clause 19.1 *force majeure* has to be 'an exceptional event or circumstance', all that is also required is that it is beyond the reasonable control of the party and could not have been reasonably provided for before entering the contract, or having arisen, have been reasonably avoided or overcome; and is not substantially attributable to the other party.

It is, of course, possible to draft *force majeure* clauses more tightly than this. As frequently seen on non-recourse financed projects, tighter definition of the risk can be achieved by providing a list of what is not *force majeure*. From an owner's perspective, it may not get its supposed turnkey solution unless the Silver Book's standard provisions are amended.

Limitations of liability

The turnkey credentials of the FIDIC Silver Book are further undermined by the provisions of clause 17.6 (*Limitation of liability*). This clause is in two parts. The first part consists of a mutual waiver and release by each party in favour of the other in respect of liability for any indirect or consequential loss, subject to exceptions. Those exceptions relate to the owner's obligation to pay the contractor any loss of profit or other loss sustained, where the contractor is entitled to terminate the contract due to the owner's default. A further exception relates to the indemnities provided by the contractor in favour of the owner in respect of loss or damage to people or property not attributable to any act or omission on the part of the owner. These two categories of exception are therefore limited in scope.

Of course, on large projects with revenue generating facilities, the indirect losses have the potential to be very great indeed. However, the wholesale exclusion of such losses from those recoverable against the contractor underline the lack of realistic assurance obtained by owners when engaging contractors to undertake works under the FIDIC Silver Book turnkey conditions.

The second part of clause 17.6 comprises a financial cap on liability. Again, there are a number of stated exclusions to this (certain types of loss, which are, in effect, carved out of the cap) but the default position under the FIDIC Silver Book is that the total liability of the contractor shall not exceed the contract price.

Of course, having excluded liability for indirect or consequential losses, it might indeed be difficult for any contractor to perform so badly such that the recoverable loss would exceed the contract price. Such direct loss would presumably involve the cost of repairs or replacement of works. Such loss may also be incurred through the imposition of delay damages.

¹⁸ The treatment of force majeure is slightly different under FIDIC short form and dredging contracts, in that these erroneously fail to provide that a force majeure event releases the affected party from its obligations under the contract. For further details, see the author's paper presented to the FIDIC International Users Conference (London, 11th-12th December 2006). A later version of this paper is available at <http://www.mayerbrown.com/london/practice/article.asp?pnid=1544&id=3288&nid=1562>.

¹⁹ Institution of Civil Engineers, Engineering and Construction Contract/The New Engineering Contract (NEC3), London, ICE/Thomas Telford (2005); obtainable via www.neccontract.com.

Furthermore, in the current market, it is rare for contractors to agree anything approaching 100% of the contract price when negotiating caps on liability particularly on the mega-projects where the contract price is in multiple hundreds of millions of dollars or in the multi-billion range. Contractors will simply not risk their balance sheet. Each case, of course, turns on its own facts and much will depend upon the contract price and the overall risk profile. That said, owners may start off suggesting a cap at less than 50% of the contract price, only to find themselves engaged in a downward trajectory as the contractor uses its market power to reduce its potential exposure.

Extensions of time

The FIDIC Silver Book adopts the term '*Time for Completion*', allowing the flexibility to apply this to a series of milestones. These can include passing of the tests on completion or other significant milestones during the course of the project.

In common with other standard form construction contracts, FIDIC Silver Book contains a mechanism for the extension of this Time for Completion in clause 8.4. The events giving rise to an entitlement to an extension of time include the issue of formal variations and any other delay or act of prevention attributable to the owner. The latter is a useful catch-all and helps counter arguments that any such act of prevention by the owner might otherwise put time at large.²⁰ Nevertheless, the operation of this provision creates a potential gateway for increased time (and subsequent cost) claims.

In addition, and rather unhelpfully, the other event giving rise to potential extension entitlement is defined in clause 8.4(b) as:

‘a cause of delay giving an entitlement to extension of time under a Sub-Clause of these Conditions ...’

One therefore has to search the rest of the FIDIC Silver Book to find those sub-clauses which confer on the contractor an entitlement to an extension of time. One example is sub-clause 4.24 (*Fossils*). If any fossils, coins or articles of value or antiquity, structures or other remains or items of geological or archaeological interest are found on the site and if the contractor suffers delay, it is to give notice to the owner and is entitled to an extension of time for any delay ‘if completion is or will be delayed ...’. This is the same formula as in clause 8.4 and involves, potentially, a prospective assessment as to the impact of the event upon the Time for Completion.

It is perhaps surprising that, under the FIDIC Silver Book, the extension of time provisions do not expressly require the contractor to take steps to avoid or mitigate the cause of delay, nor do they seek to make entitlement to any such extension conditional upon taking such steps.²¹ For owners seeking a turnkey solution, it is likely that they will want the extension of time provisions under the FIDIC Silver Book to be strengthened considerably and clarified to gather in all those conditions which might give rise to an entitlement. Such clarity allows the events to be more closely managed and delays to be avoided, or at least mitigated.

As to how progress and, indeed, extensions of time may be measured, the FIDIC Silver Book contains provisions requiring the contractor to submit a programme and to revise this:

‘whenever the previous programme is inconsistent with actual progress or with the Contractor’s obligations’.²²

This, of course, gives rise to the potential for confusion, as the programme may be updated for actual progress which represents a position of default (due to culpable delay on the part of the contractor). This makes it difficult to assess the impact on the Time for Completion, which may not have changed if there had been no events giving rise to an entitlement to extend. This is another area where care needs to be taken in the operation of the contract. Amendments to the Silver Book may be appropriate.

20 Assuming, for this purpose, that the governing law of the contract is one that recognises such a concept; not all legal systems do.

21 The exception is in the case of force majeure. The definition in clause 19.1 of the FIDIC Silver Book (see note 2) requires that the event, as well as being ‘exceptional’, must be something which the party affected could not reasonably have provided against, or once having arisen, is not something which could reasonably have been avoided or overcome.

22 Clause 8.3 (see note 2).

Of course, such extension of time provisions are necessary in order to provide the contractor with relief against its potential liability for liquidated damages, if it fails to complete the works by the Time for Completion. However, and equally, the reality is that if there are changes in design which, arguably, go beyond design development and constitute a formal variation, or if there are acts or omissions on the part of the owner which delay, impede or prevent the contractor from maintaining progress and achieving the Time for Completion (or to the extent that the contractor can demonstrate that such completion ‘will be delayed’, as above) then the supposed certainty of the turnkey solution is again rendered more illusory than real.

Such practical difficulties are frequently compounded on large projects where there may be a number of separate EPC/turnkey contractors engaged by the owner, undertaking different parts of the project. The possibility that one EPC contractor may cause (allegedly or otherwise) delay to another is a potent risk. In practice, owners will engage one contractor to oversee and project manage all project activities, from engineering and procurement through to construction management. Whilst that contractor will not underwrite the performance of the various EPC/turnkey contractors engaged on the project, it will commonly be incentivised to ensure tight control and monitoring of their activities. This provides a system whereby the project can be managed effectively so that the owner has some assurance that the project will complete within its time, cost and performance targets. Frequently the project management role is also given to the same contractor who undertakes the infrastructure EPC contract for the works. This is because that same contractor has most direct physical and technical interface with each of the separate EPC/turnkey contractors. As noted earlier, large projects have a number of moving parts, when viewed as a series of contracts.

Conclusions

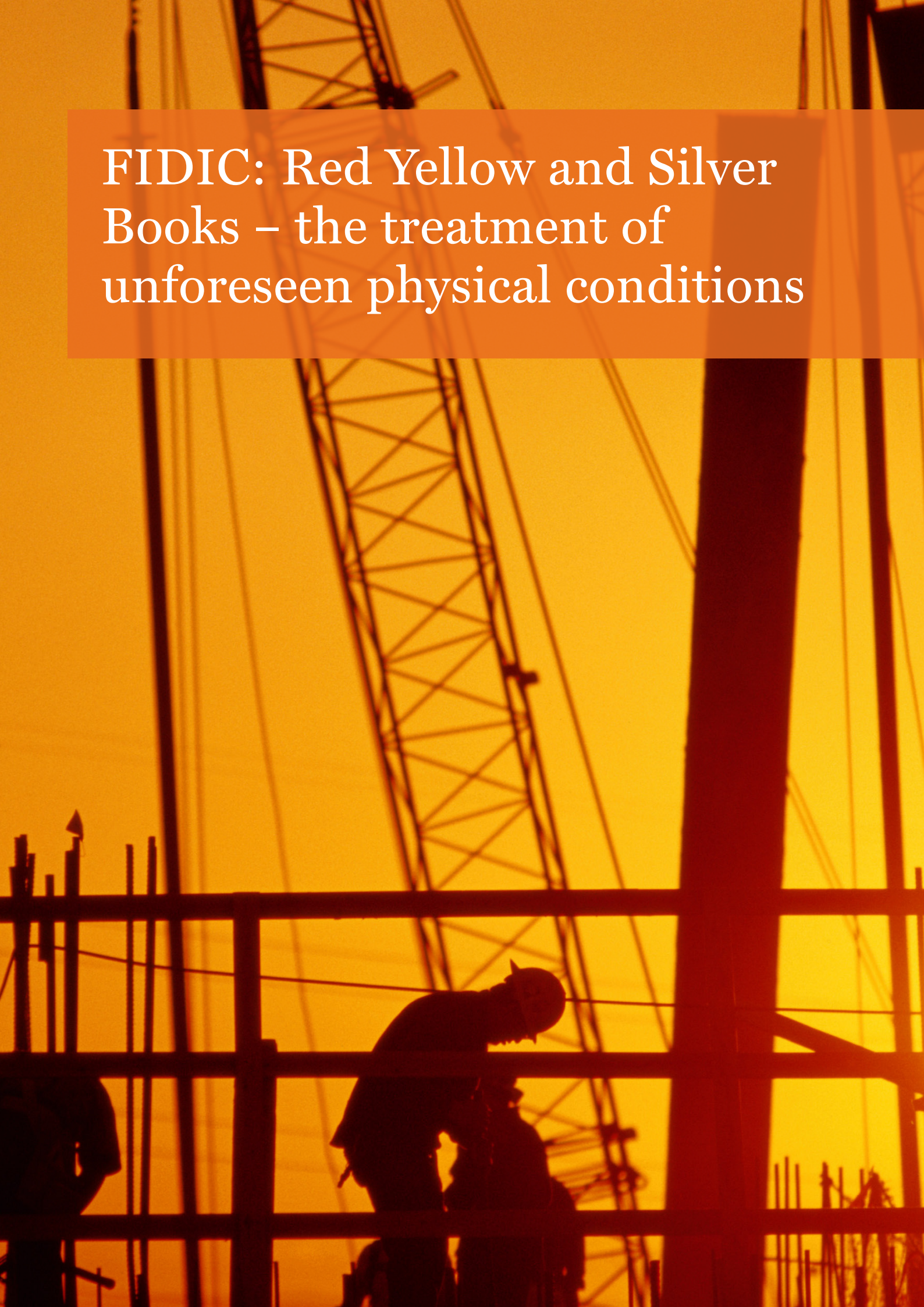
This paper did not set out to be critical of the FIDIC Silver Book, in the sense of producing gratuitous complaints. It is easy for lawyers to criticise any standard form, equally any form of bespoke construction contract. It is right too to recognise that, in many respects, the FIDIC Silver Book does what it says on the tin: the provisions dealing with unforeseen ground conditions, responsibility for the owner’s design and the provisions as to the sufficiency of the contract price are all good devices that help assure the Silver Book as a true turnkey contract. However, there are undoubtedly a number of areas where the turnkey qualities of the form can be improved by tighter drafting. This may be something FIDIC wish to take on board in its next edition of the Silver Book.

The other major factor militating against the FIDIC Silver Book achieving turnkey credentials for owners’ projects is the size, shape and structure of the projects on which it is used. These factors cannot be attributed to FIDIC, though a clearer recognition of their impact by both owners and contractors (and their respective advisers) can only help improve the eventual quality of the contractual and management arrangements established for such projects.

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The background of the slide is a photograph of a construction site at sunset. The sky is a deep orange, and the silhouettes of construction workers and a large crane are visible against the bright light. The workers are positioned on a steel framework, and the crane's lattice structure is prominent in the upper half of the image.

FIDIC: Red Yellow and Silver Books – the treatment of unforeseen physical conditions

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FIDIC: Red Yellow and Silver Books – the treatment of unforeseen physical conditions

An abridged version was published in the *Construction Law Review* published by the Chartered Institution of Civil Engineering Surveyors in July 2014.

Introduction

Whilst the FIDIC standard forms have their origins in the fourth edition of the ICE Conditions of Contract,¹ they have been exported to both common law and civil law jurisdictions and are nowadays widely encountered in projects in west, east and northern Europe, the Middle East, Africa, the Far East, China and South America.² FIDIC forms of contract are also sometimes encountered on UK projects, notably where international clients, contractors and their advisers look to use an ‘international’ standard form as a basis of their contract.

In this article, I want to examine how some of the FIDIC forms of contract treat the issue of unforeseen physical conditions. I shall also look briefly at the prerequisites for advancing a claim for extra time or money under the FIDIC forms and comment on a recent case decided in the Technology & Construction Court in London concerning the FIDIC Yellow Book.

Contract administration under FIDIC

This article starts by focusing on these issues in context of the Red, Yellow and Silver Books (there are others). The Conditions of Contract for Construction (the Red Book) is designed for traditional procurement, where the Contractor constructs according to the Employer’s design. Valuation under the Red Book is based on a bill of quantities with unit rates; it is not a lump sum contract. Further, under the Red Book a third party independent Engineer administers the contract on behalf of the Employer. The Engineer is also present under the Conditions of Contract for Plant and Design - Build (the Yellow Book) where the Contractor is responsible for errors in the Contractor’s Documents but generally speaking not for errors in the Employer’s Requirements.³ In contrast, under the Conditions of Contract for EPC Turnkey Projects (the Silver Book), there is no independent Engineer and the Contractor is responsible for all of the design and construction activities. Such hard delineations are often adjusted in practice; the FIDIC forms represent a starting position for negotiation and are very often changed.

However, the key point is that the Engineer occupies an important role under FIDIC Red and Yellow Books as he acts both as Employer’s representative for the purpose of administering the contract in issuing instructions for Variations and the like, as well as acting in a neutral capacity in evaluating entitlements that arise such as adjusting the Time for Completion for Variations. Under the FIDIC Silver Book, conceptually design responsibility is allocated to the Contractor who is paid to provide a turnkey solution so the need for an Engineer to administer the contract is removed. However, this is another hard delineation that is seldom maintained in practice on turnkey projects using FIDIC Silver; the Employer will often want its Engineer to act as the Employer’s Representative, to perform certain administrative and other tasks otherwise allocated to the Employer. For instance, this could be for the purpose of issuing Determinations under Sub-Clause 3.5 or assessing entitlements to additional time or money under Clauses 8 and 14.

¹ Published in January 1955, with the first edition of the FIDIC Red Book being published in 1956.

² FIDIC is less prevalent in the North American market because that market already has a corpus of its own standard forms of engineering contract.

³ Under Clause 1.9 of the Yellow Book, it is provided: “If the Contractor suffers delay and/or incurs Cost as a result of an error in the Employer’s Requirements and an experienced contractor exercising due care would not have discovered the error when scrutinising the Employer’s Requirements... the Contractor shall give notice to the Engineer and shall be entitled subject to sub-clause 20.1 to ... (a) an extension of time ... and (b) payment of any such Cost plus reasonable profit...”

Allocation of risk for ground conditions

An important feature of the Red, Yellow and Silver Books is the degree to which risks are allocated to the Contractor in relation to unforeseen physical conditions. The approach taken by standard forms of engineering contract to this risk has, traditionally, been to adopt a test of foreseeability. Thus, clause 12 of the ICE Conditions of Contract for Design and Construct⁴ provides:

“If during the carrying out of the Works the Contractor encounters physical conditions (other than weather conditions or conditions due to weather conditions) or artificial obstructions which conditions or obstructions could not, in his opinion, reasonably have been foreseen by an experienced contractor, the Contractor shall as early as practicable give written notice to the Employer’s Representative.”

Given the origin of the FIDIC forms, it is not surprising that under FIDIC Red and Yellow Books, this traditional foreseeability test is also applied. Clause 4.10 of those FIDIC forms requires the Employer to have made available all relevant data in his possession on sub-surface conditions, not later than 28 days prior to the submission of the tender. Clause 4.11(b) then dictates that the Contractor is deemed to have based its Contract Price on such data. The Employer warrants the accuracy of the information he has provided and the Contractor is only responsible for interpreting the data. Further, under the FIDIC Red and Yellow Books the Contractor is deemed to have obtained all necessary information as to risks which may influence or affect his tender for the works. He is also deemed to have inspected and examined the site and other available information. However, these deeming provisions are limited in their application “to the extent” that the investigation by the Contractor is “practicable, taking into account cost and time.” This provides the Contractor with some basis for relief in the event its investigations (due to the constraints of available time and cost) do not reveal matters which subsequently manifest themselves in the form of sub-surface conditions different to those assumed when tendering and later entering into the contract.

On the allocation of risk for unforeseen ground conditions, the FIDIC Red and Yellow Books nevertheless broadly adopt the ICE clause 12 approach: the Employer carries the risk of physical conditions which could not have reasonably been foreseen by an experienced contractor at the date of tender.

The FIDIC Silver Book, in keeping with its turnkey approach to risk allocation, takes this one important step further. Whilst the Employer provides information to tendering contractors, it is the Contractor who is responsible for verifying as well as interpreting that data. There is no warranty by the Employer as to the sufficiency or completeness of the information provided. Under the FIDIC Silver Book, the risk of adverse physical conditions is intended to be allocated to the Contractor, who “accepts responsibility for having foreseen all difficulties and costs of successfully completing the Works.” Clause 4.12(c) provides a catch-all statement to ram home the point: “The Contract Price shall not be adjusted to take account of any unforeseen difficulties or costs.”

Contractors’ reactions to Silver Book risk transfer

It will not be surprising to learn that, in practice, these particular provisions of the Silver Book are commonly subject to heavy negotiation between the parties.

One device is simply to revert to the more traditional test of foreseeability so that the risk of the unforeseeable remains with the Employer. Another device is for the risk to be taken by the Contractor but only after it has had a reasonable opportunity to satisfy itself as to risks, contingencies and other circumstances concerning the site conditions. This is commonly undertaken during the FEED stage, where investigations and design development is undertaken on a reimbursable basis (i.e. paid for by the Employer), so that the Contractor can take an informed view as to the physical site conditions and arrive at a design, methodology, programme and a Contract Price for the works that is robust and reliable.

A further variant on this is to take the existence of ground condition reports and all the surveys and to use these to extrapolate assumed conditions which are then included as a benchmark under the contract. If variances are found in practice from the assumed conditions which affect time or cost, their impact may be allocated back to the Employer rather than retained by the Contractor.

Of course, the Contractor may also price the risk by including a sufficiently large contingency in the Contract Price. However, in a market where there is an excess of contracting capacity, with contractors chasing turnover and bidding prices at zero or negative margins, the likelihood of a winning bid containing an adequate risk allowance may be considered small.

Much depends on the relative bargaining power of the parties and, of course, the skill and experience of their advisers.

⁴ Second edition (September 2001) and officially withdrawn in August 2011, to be replaced by the new Infrastructure Conditions of Contract.

A recent decision on the FIDIC Yellow Book: *Obrascon*

A recent case involving a contract based upon FIDIC Yellow Book is illustrative of the issue as to foreseeability: *Obrascon Huarte Lain SA v Attorney General for Gibraltar* (2014).⁵ The judgment in the *Obrascon* case was delivered by Mr Justice Akenhead in the London TCC on 16 April 2014.

This dispute arose out of a contract entered into in December 2008 with a 24 month completion period and a Contract Price of some £30.2 million. However, some two years into a two year contract, the Contractor found itself two years late, with delay damages clocking up at a rate of £5,000 per day and having been paid only a third of the Contract Sum but with substantial running costs continuing. OHL forecasted that it needed nearly £80 million further to complete the job with further substantial costs for dewatering and decontamination of ground water and dealing with contaminated materials which it claimed were “unexpected” and “not accounted for in the offer”.⁶

The only road between Spain and Gibraltar crosses the airport runway. The road has to be closed when a plane lands. The works were intended to avoid this transport clash and ease congestion. The Employer required a new dual carriageway to be constructed, running along the eastern edge of the airport runway and a twin bore tunnel under one end of the runway in order to provide a route for traffic, thereby removing the transport clash with incoming and outgoing flights.

The illustrative design provided to tenderers delineated the route of the intended tunnels and included an environmental statement which contained advice as to the presence of contaminated material in the made ground. This made ground would have to be excavated as part of the works. The Contractor ultimately launched its claims (originally under the Contract and thereafter before the Court)⁷ for an extension of time and additional payment on the basis that it had encountered large quantities of contaminated ground and different types of rock which it had not reasonably foreseen at tender stage. These were said to amount to “Unforeseeable” physical conditions under Clause 4.12 of the FIDIC Yellow Book terms which had affected progress, caused delay and justified an increase in the cost of the works payable to the Contractor. The progress of the works had also been adversely impacted by heavy rainfall and the Contractor sought relief for this event too.

As noted above, FIDIC Red and Yellow (and even more so in the case of Silver) require the transfer of certain risks to the Contractor in respect of site conditions. In *Obrascon v Attorney General for Gibraltar*, it was necessary for the Court to apply the FIDIC definition of “Unforeseeable” in the Yellow Book. This is defined to mean “not reasonably foreseeable by an experienced contractor by the date for submission of the Tender.” The approach of the Judge is text-book stuff but a salutary reminder because, as *Obrascon* illustrates, contractors may sometimes be suspected of having underestimated the extent of site risks and thereby bid a Contract Price that is inadequate for the extent of the works required to complete the project.

Application of the foreseeability test

In relation to the application of the foreseeability test, the Judge said some interesting things which contractors (whether under FIDIC or other forms of construction contract with similar tests) would be well advised to consider.

Thus and in relation to contamination reports and related data provided to the tendering contractors: “I am wholly satisfied that an experienced contractor at tender stage would not simply limit itself to an analysis of the geotechnical information contained in the pre-contract site investigation report and sampling exercise”. The Judge went on to “adopt what seems to me to be simple common sense by any contractor in this field” when contemplating the presence of contaminants (as a result of use over many years) in made ground which had to be removed (and disposed of) as part of the works.⁸

Further, in reviewing the particular site characteristics in Gibraltar, the Judge said this: “Tendering contractors must and should have known and appreciated that historically, the site had been influenced environmentally by its military use (over hundreds of

⁵ *Obrascon Huarte Lain SA v Attorney General for Gibraltar* [2014] EWHC 1028 (TCC).

⁶ Paragraph 109 of the Judgment.

⁷ The proceedings were commenced in the High Court in Gibraltar but the parties subsequently agreed to transfer these to the specialist Technology and Construction Court within the High Court in London.

⁸ Paragraph 215 of the Judgment.

years) which could be a source of contamination from heavy metals and trace elements and by its use as an airport area, where it would be expected that evidence of the presence of hydrocarbons and related derivatives would be found ... the ES⁹ contained reference to the history and various historical maps and ... actually showed the precise position of earthwork rifle butts in 1869 pretty well along the line of the tunnel and adjacent ramps ... it must have been obvious to anyone who applied any real thought to this that the residues of what soldiers had been firing with on these rifle ranges would include the lead in the bullets or musket balls likely to have been used. Those butts had obviously been levelled years before 2007; thus foreseeably there would have been lead spread around the area within the made ground.”¹⁰

In other words, contractors are not limited to reviewing only the data that the Employer makes available. Rather, when assessing what is “reasonably foreseeable by an experienced contractor” the law expects the contractor to read around the subject and use its own experience and common sense. However, the Judge found on the evidence that “OHL did not in fact anticipate, expect or in practice plan for encountering any significant quantities of contaminated materials at all”.¹¹

Further and where empirical data is supplied, contractors are expected to review this intelligently. In *Obrascon*, the ITT included a requirement that tenderers should allow for 10,000m³ of contaminated material. This led to the Judge to conclude “in my judgment any experienced contractor tendering for the road and tunnel works would foresee that there would or at least could realistically be substantial quantities of contaminated material.” He went on to find that the 10,000m³ figure “was hardly anything more than a ‘say’ figure and is in effect a warning to tendering contractors that a sizable amount of contaminated ground should be anticipated.”¹²

The judgment is also interesting in what it says about the reliability of expert evidence where the data issued at tender stage is itself only a sample. That information included a contamination report which was based on a series of boreholes which revealed a wide variety of depths at which contamination was present in the made ground. However, the Judge found that the expert evidence which sought to extrapolate from or interpolate between the samples to produce an assessment as the amount of such contamination was “no more than guesswork and essentially unreliable”.¹³

As the learned Judge noted, it might be different if excessive quantities of hydrocarbons were found at the same depth over say ten samples within a 400m² area; that might allow for a reliable extrapolation/interpolation exercise to be carried out. Similarly, it might be easier to draw conclusions from a series of Standard Penetration Tests as to the likely strength of rock. However, the results of the contamination sampling within the made ground showed a much more random distribution, which meant that a definitive conclusion as to the likely amount of contamination was not available. In such circumstances, prudent contractors should allow for more, not less, quantities of potentially contaminated material.

What should the contractors do to address the risks they ought reasonably to foresee?

The Judge also provided some guidance as to how a contractor in OHL’s position should have addressed the foreseeable risk of contamination. Whilst each case turns on its own facts, it is suggested that the steps recommended by the Judge are more likely than not to be applicable in the majority of similar cases. Based on the evidence provided to tendering contractors in *Obrascon*, the Judge suggested that OHL could reasonably have done all or some of the following:

Make a substantial financial allowance within the tendered price for dealing with what was likely to be a large quantity of contaminated material;

Plan and price for a post-contract site investigation including further trial pits and testing in order to build up a picture of where there was contamination, then establish a working method on how to remove it and what to do with it;

Plan to remove all the made ground as having a good chance of containing contaminants; and

Plan the design and method of construction to allow for randomly distributed quantities of significant contaminants in the made ground.

⁹ Environmental Survey report issued to all tendering contractors.

¹⁰ Paragraph 215 of the Judgment.

¹¹ Paragraph 224 of the Judgment.

¹² Paragraph 219 of the Judgment.

¹³ See paragraph 220 of the Judgment.

Ultimately, in *Obrascon* the Judge found that the Contractor did not in fact encounter physical conditions in relation to contaminated material over and above that which an experienced contractor could reasonably have foreseen by the date of submission of its tender. It followed that the contractor's claim for "Unforeseeable" physical conditions failed in relation to the contamination. The Judge made a similar finding in relation to the extent of contaminated ground water.

OHL also encountered rock (when excavating for the diaphragm wall panels) at higher levels than it said an experienced contractor at tender stage could reasonably have foreseen. As a result it had to adopt a different and more time consuming costly working method to excavate through the rock. Here, the Contractor was partially successful, with the Judge assessing that "experienced contractors could not reasonably have foreseen 500m³ of the hard material or rock that would need chiselling"¹⁴ and allowed this quantity as being unforeseeable. It might be noted that this was against the Employer's expert evidence to the effect that over 4000m³ was foreseeable.

FIDIC, Contractors' claims and conditions precedent

There is one particular clause in FIDIC forms which strikes fear into the heart of even the most well organised contractor, namely the condition precedent that must be satisfied in order to recover against what otherwise may be an entirely meritorious claim.

Clause 20.1 of FIDIC Red, Yellow and Silver Books is in the same terms and provides that if the Contractor considers it is entitled to an extension of time and/or any additional payment, it is required to give notice "describing the event or circumstance giving rise to the claim as soon as practicable, and not later than 28 days after the Contractor became aware, or should have become aware, of the event or circumstances". Clause 20.1 goes on to provide that if the Contractor fails to give such notice then time is not extended, neither is he entitled to additional payment and the Employer is discharged from liability. In the *Obrascon* case, it was accepted by Counsel for the Contractor that Clause 20.1 imposes a condition precedent to entitlement which must be satisfied if the claim is to be successfully advanced.

This is an important judgment from a well-respected senior TCC Judge on a FIDIC provision which Contractors and Employers frequently fight over.¹⁵

The Judge found that there was no prescribed form for giving notice under Clause 20.1. Thus, email correspondence, minutes of meetings and other written records could, in principle, suffice as notice provided it was clear what was being notified. However, the Judge made clear (and *Obrascon* is now authority for the proposition) that in order to constitute a valid notice under Clause 20.1 of the FIDIC Yellow Book form, the notice must be in writing, must be clear that the contractor intends to notify a claim and must describe the event or circumstance relied upon.

Clause 20.1 is in materially similar terms under FIDIC Silver, Yellow and Red Books¹⁶. This case is therefore of wider application when it comes to considering whether notice of a contractor's claim has been validly communicated. However, FIDIC's Gold Book, published in 2008, requires notices to comply with certain express requirements including being "identified as a Notice and include reference to the Clause under which it is issued"¹⁷. The *Obrascon* case may encourage parties to tighten up the drafting of their FIDIC-based contracts when using Silver, Yellow or Red Books, adopting some of the drafting clarifications found with the Gold Book.

Pulling the trigger under Clause 20.1 notifications

Interestingly, in relation to the operation of Clause 20.1 for claims for extensions of time, in *Obrascon* the Judge went back to the source of such entitlement which is to be found in the wording of Clause 8.4 of the FIDIC form. This provides that "the Contractor shall be entitled... to an extension of the Time for Completion if and to the extent that the Completion... is or will be delayed by any of the following causes...". The Judge seized on the words "is or will be delayed" and noted that the "event or circumstances giving rise to the claim" could arise either when it was clear there will be a delay (a prospective delay) or when the delay had been at least started to be incurred (a retrospective delay). This led to a more generous time scale for the Contractor to notify the delay.

¹⁴ Paragraph 270 of the Judgment.

¹⁵ Similar condition precedent language is also found in NEC 3 contracts.

¹⁶ Save that under Silver, notice is given to the Employer as there is no Engineer (unlike under Red and Yellow Books).

¹⁷ Gold Book, Clause 1.3

However and importantly, this runs counter to the requirement in Clause 20.1 for the Contractor to give notice within 28 days after it “became aware, or should have become aware, of the event or circumstance”. If the Contractor ought to know that completion “will be delayed” by some event, then Clause 20.1 says it should notify within 28 days and if it fails to do so, it forfeits its right to an extension of time. However, according to the logic applied by Mr Justice Akenhead in *Obrascon*, the Contractor has the option of postponing notification until such time as the effect of the delay “is” occurring. Whilst it should be recognised that Clause 8.4 deals with matters of entitlement whereas Clause 20.1 is concerned with the requirement to give a notice of any claim, Clause 8.4 nevertheless refers to such entitlement being “subject to Sub-Clause 20.1” which indicates that the claim notification requirements under Clause 20.1 are intended to prevail. Thus, the Judge’s findings as to the operation of Clause 8.4 of the FIDIC Yellow Book (which is identical in the Red and Silver Books) may be regarded as controversial. All that said, the Judge’s reasoning is hard to fault. As he pointed out:

“The wording in Clause 8.4 is not: ‘is or will be delayed whichever is the earliest’” (my emphasis).

Of course, *Obrascon* is a decision of the English High Court, decided under English law and therefore applies English common law principles. It may not necessarily be followed in other jurisdictions.

In any event, applying these requirements in relation to the weather delay claim, even though as a matter of fact the Judge found that six days delay was caused by the impact of rainfall, the Judge also found that the notice relied upon by the Contractor did not in fact describe “the event or circumstance giving rise to the claim” but referred to a future effect of rainfall on the contaminated material on site, rather than the effect of the rain as it fell. Harsh as it may seem, this notice was found not to comply with the requirements of Clause 20.1 and the weather delay claim therefore failed.

Termination

The *Obrascon* contract (following the standard FIDIC text) said it could be terminated for failure by the contractor to comply with a notice requiring it to remedy a failure to carry out “any obligation” under the contract. But what if an unremedied breach is trivial? Does the termination option still apply?

The court noted that “*Hudson’s Building and Engineering Contracts*” (12th Edition) had correctly stated that determination clauses such as the one in question will generally be construed as permitting termination for significant or substantial breaches, as opposed to trivial, insignificant or insubstantial ones. That accorded with commercial common sense. The parties could not sensibly have thought (objectively) that a trivial contractual failure could lead to contractual termination. One day’s culpable delay on a 730 day contract or 1m² of defective paintwork out of 10,000m² good paintwork would not, for reasonable and sensible commercial people, justify termination, even if the contractor did not comply with a notice to remedy. On the other hand, the breach did not have to be repudiatory. What is trivial and what is significant or serious will depend on the facts.

This issue is likely to be relevant for Contractors engaged under FIDIC forms of contract. It is also likely to be relevant where Contractors are engaged on terms where the contract provides for specific remedies, for breach say of an obligation to comply with the specification and with a termination right applicable after a long-stop date, as may be encountered under many bespoke EPC contracts. This case is consistent with other judicial guidance to the effect that the remedy has to be proportionate to the damage.

Some concluding remarks on the impact of *Obrascon*

The default position for dispute resolution under FIDIC contract forms calls for arbitration as the ultimate forum for dispute resolution. As FIDIC is often used on overseas projects between parties of different nationalities, international arbitration is also seen as preferable to litigating disputes in the local courts, avoiding issues as to quality of the local tribunal as well as issue of enforceability.¹⁸ It is therefore unsurprising that there are not many publicly decided cases on FIDIC forms of contract. The *Obrascon* case merits a read if only for this reason alone.

However, *Obrascon* is also of interest because it illustrates the practical application of the foreseeability test. This is likely to impact in cases where it is considered the contractor has not taken proper care during tender stage to evaluate site risks and build these into his design, working methodologies, programme and pricing. Where the terms of the Contract allocate such risks to the Contractor, up to the extent of reasonable foreseeability, it is perhaps an obvious point (albeit one seemingly ignored by the contractor in this case) that some careful thought needs to be given to identifying and pricing site risk. In the words of the Judge in the *Obrascon* case: “It is difficult to avoid the conclusion that OHL knew that there was going to be some contamination but hoped to avoid having to do anything about it”.¹⁹ If ever there was a salutary warning for contractors, this is it.

The judgment in *Obrascon* also emphasises that under English law, non-compliance with Clause 20.1 notice requirements in the FIDIC suite of contracts precludes a Contractor from pursuing what might otherwise be a valid claim.²⁰ This may encourage closer adherence to such provisions in jurisdictions where Clause 20.1 may be regarded as having a similar effect.

Finally, *Obrascon* provides a new (and potentially controversial) approach as regards the notification of Contractors’ claims for an extension of the Time for Completion under the FIDIC suite of contracts. Whilst Clause 20.1 states that notice of any such claim should be given within 28 days of the date when the Contractor becomes aware, or should have become aware of the event giving rise to the right to claim, Clause 8.4 only requires notice from the date when the effect of the delay is actually experienced, which could be later than the time limit contemplated by Clause 20.1. As the extension of time claims of Contractors often entail substantial sums of money, this point is of more than mere academic interest.

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¹⁸ If the host states of the contracting parties have ratified the 1958 New York Convention on the Recognition and Enforcement of Arbitral Awards, the award should be enforced through the local court.

¹⁹ Paragraph 55 of the Judgment

²⁰ FIDIC Gold Book moderates this draconian impact by conferring upon the DAB jurisdiction to overrule the 28 day limit where it finds that the reason for late notification was “fair and reasonable”.



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