Allocation of Risk in Construction Contracts

Risk in construction contracts

'Risk', in a project delivery context, can be defined as 'an event or set of circumstances that,should it occur, will have an effect on the achievement of the project's objectives'.[1] Risk exists as a consequence of uncertainty, and, in any project, the exposure to risk producedv by uncertainty must be managed.[2]

Construction projects are often complex, highly technical and of high value, and can have construction periods that may span a number of years. Common risks prevalent in construction projects include weather, unexpected job conditions, personnel problems, errors in cost estimating and scheduling, delays, financial difficulties, strikes, faulty materials, faulty workmanship, operational problems, inadequate plans and specifications, and natural disasters.[3] Projects will also have additional specific risks dependent on the nature of the project and its surrounding circumstances.

Although the volume and nature of contractual documentation for a construction project will vary as a consequence of the nature of the project, its scale and the procurement methodology adopted,[4] a construction contract may be simply described as a contract between a contractor and an employer whereby, 'one person (the contractor) agrees to construct a building or a facility for another person (the employer) for agreed remuneration by an agreed time'.[5] A construction contract will include a compact of rights and obligations[6] between the parties by which the parties pre-allocate responsibilities between themselves in respect of certain risks that may transpire during the contract's execution. In doing so, the parties define the impact of such risks on the three key elements of the construction: the product or facility that is to be constructed by the contractor, the time at which the product or facility must be completed by the contractor and the amount the employer is obliged to pay the contractor. The collective allocation of such risks in a construction contract represents its 'risk allocation'.

Ellis Baker
Partner, London

Luke Robottom
Partner, Abu Dhabi

Anthony P. Lavers
Counsel, London

An extract from the first edition of GAR's Guide to Construction Arbitration, first published in September 2017. The whole publication is available at http://globalarbitrationreview.com/edition/1001036/the-guide-to-construction-arbitration

1 Peter Simon, David Hillson and Ken Newland, *Project Risk Analysis and Management Guide*, The Association for Project Management, p. 17 (1997).
2 See Catriona Norris, John Perry and Peter Simon, *Project Risk Analysis and Management*, The Association for Project Management, p. 3 (2000).
3 See Samuel Laryea and Will Hughes, *The Price of Risk in Construction Projects* (2006).
4 See Julian Bailey, *Construction Law*, Volume 1, 2nd ed., p. 49 (2016).
5 Peter Simon, David Hillson and Ken Newland (op. cit.), p. 17 (1997).
6 Julian Bailey (op. cit.), p. 1512.

Allocation of Risk in Construction Contracts

Pursuit of a 'fair and equitable' allocation of risk

Typically, in preparing the contract document bid package, the employer will be in a position to decide on its intended risk allocation. While there may be, in such circumstances, a temptation to allocate major risks to the contractor, this must be tempered by an understanding of the adverse consequences of unilaterally assigning risk where doing so may preclude the submission of bids or result in such an increase in cost that the project is no longer financially viable.[7] Improper risk allocation may also result in prolongation of construction completion times, wastage of resources and increased likelihood of disputes. As Shapiro states, 'Proper risk identification and equitable distribution of risk is the essential ingredient to increasing the effective, timely and efficient design and construction of projects. If the parties to the construction process can stop thinking in an adversarial manner and work in a cooperative effort towards obtaining an equitable sharing of risks based upon realistic expectations, the incidence of construction disputes will be significantly reduced.'[8]

While it is possible for parties to negotiate the terms of a construction contract individually, the possibility of unwanted variance and scope for abuse of bargaining power on both sides has led to a number of standard form contracts being developed by various entities, and it is now usual in major projects for one of these standard forms to be used as the basis for the final construction contract.[9] One of the pervasive features of standard form contracts is an attempt to produce a 'fair and balanced' allocation of risk.[10] The rationale for pursuing this is that doing so will provide the best chance of successful project delivery. Echoing Shapiro, Lane notes that, '[a] contract which balances the risks fairly between a contractor and an employer will generally, in the absence of bad faith, lead to a reasonable price, qualitative performance and the minimisation of disputes.'[11]

It has been suggested that to achieve a fair and equitable allocation of the risks inherent in construction projects, a risk should be allocated to a party if:

- the risk is within the party's control;
- the party can transfer the risk, for example, through insurance, and it is most economically beneficial to deal with the risk in this fashion;
- the preponderant economic benefit of controlling the risk lies with the party in question;
- to place the risk upon the party in question is in the interests of efficiency, including planning, incentive and innovation; and/or
- if the risk occurs, the loss falls on that party in the first instance, and it is not practicable, or there is no reason under the above principles.[12]

Commenting on this, Bunni notes that, while the principle of control of a risk is a powerful method in the determination of risk allocation, it is not comprehensive and other principles must be utilised to address adequately the allocation of risk in a construction contract.[13] For example, 'acts of God' or 'force majeure' cannot be controlled by either party, and, instead, the consequences of such risks must be assessed and managed. Consequently, Bunni proposes that the following four principles are used for allocating risks in construction contracts:

- Which party can best control the risk and/or its associated consequences?
- Which party can best foresee the risk?
- Which party can best bear that risk?
- Which party ultimately most benefits or suffers when the risk eventuates?

---

7 Bryan Shapiro QC, 'Transferring Risks in Construction Contracts', p. 5 (2010), available at: http://www.shk.ca/wp-content/uploads/2013/02/Transferring-Risks-in-Construction-Contracts-BSS.pdf.

8 Ibid, p. 17.

9 See Graham Vinter, *Project Finance*, 4th ed. , Sweet and Maxwell, p. 1 (2013).

10 In relation to FIDIC, see Ellis Baker, Ben Mellors, Scott Chalmers and Anthony Lavers, *FIDIC Contracts: Law and Practice*, Informa, p. 6 (2009).

11 Patrick Lane SC, 'The Apportionment of Risk in Construction Contracts', International Conference on Arbitration and ADR in the Construction Industry, Dubai, (2005).

12 See article by Max Abrahamson, *Journal of the British Tunnelling Society*, Vols 5 and 6, November 1973 and March 1974; and CIRIA Report R 79 'Tunnelling – improved contract practices' (1978).

13 Nael Bunni, *The Four Criteria of Risk Allocation in Construction Contracts*, International Construction Law Review, Vol 20, Part 1, p. 6 (2009).

Allocation of Risk in Construction Contracts

The question of what is a 'fair' risk allocation is, ultimately, a subjective one; in deciding how it wishes to procure a project and the way it seeks to allocate risks, an employer will need to weigh up the theoretical efficiency of the risk allocation with political and market dynamics and the needs of the particular project.

Allocating risk in a construction contract

There are various methodologies or 'routes' by which an employer may wish to procure a construction project. The methodology selected will, necessarily, have an impact on the allocation of risk in certain respects in the construction contract. A summary of the major methodologies and their primary impacts on risk allocation is set out below:

Traditional procurement

In a traditional or design-bid-build procurement, the employer will engage a design consultant to prepare the design for a project and then bid and award a construction contract to a contractor to construct the project in accordance with that design. In a construction contract used in a traditional procurement, the employer will take responsibility for the design provided, with the consequence that the contractor will be entitled to relief (which may be in the form of an extension of the time for completion or increase in the agreed remuneration) if there are defects or deficiencies in such design. (See the section on the FIDIC Red Book in Chapter 4, 'Introduction to the FIDIC Suite of Contracts', and specifically below.)

Design and build

In a design and build contract, the contractor will be responsible for both the design and construction to meet the contractual specification. This offers the employer 'single point responsibility' for any defects arising out of the design and/or construction of the works. This is an advantage relative to traditional procurement, where it may be difficult to establish whether a defect was caused by defects in design (and therefore the responsibility of the design consultant) or construction (and therefore the responsibility of the construction contractor) and where losses resulting from defective design may significantly outweigh caps on liability in the consultant appointment. (See the section on the FIDIC Yellow Book in Chapter 4, 'Introduction to the FIDIC Suite of Contracts', and specifically below.)

EPC/turnkey

In engineering, procurement and construction (EPC) contracts, a single contractor takes responsibility for all elements of design (engineering), construction and procurement of a project on a 'turn-key' basis. In such contracts, the contractor will have significant discretion to design the project as it sees fit, so long as the output based or functional specification is satisfied. These contracts typically involve a heavy transfer of risk from the employer to the contractor, meaning the contractor will have limited grounds on which to seek an extension to the time for completion or increase in the agreed lump sum price. (See the section on the FIDIC Silver Book in Chapter 4, 'Introduction to the FIDIC Suite of Contracts', and specifically below.)

Alliance contracting

Alliance contracting is a procurement model that has increased in popularity over recent years, particularly in public sector procurement in Australia and New Zealand. Alliance contracting involves the parties to the project co-operating in a spirt of 'mutual trust and cooperation.' Alliance contracts include a risk allocation which is fundamentally different from that in construction or design and build/ EPC contracts and will typically involve a sharing of cost overruns or savings between the parties, regardless of how those overruns or savings came about.[14]

Allocating specific risks

Typical risks that are allocated between the parties in construction contracts include:

Quantities

The volume of resources required for a construction project is a source of uncertainty at the outset of any project. In contracts for a lump sum remuneration, the contractor is paid a fixed amount for works regardless of the quantity of resources used. The risk of volumes of resources required sits with the contractor and must be accounted for in the formulation of its bid. Conversely, under a re-measurement contract, the parties agree unit rates for the resources required for some or all of the works and remuneration is calculated based on the actual quantities used. In such an arrangement, the employer can be said to bear the volume or quantity risk.

14 See Julian Bailey (op. cit.), p. 39.

Allocation of Risk in Construction Contracts

Errors in employer-provided information

In construction projects, it is common for the employer to provide the contractor with a range of information, including in relation to what is to be constructed (for example, the specification for the works), the location and condition of the site on which the project is to be constructed and other factors related to how the work will be undertaken (for example, the permits required for the work, the means of accessing the site and prevailing weather conditions at the site). Such information may be provided to the contractor for 'information only' or on a 'non-reliance' basis. In such cases, the risk of errors or inaccuracies in such information will usually sit with the contractor. Alternatively, the employer may assume some or all of the risk, by allowing the contractor time or cost relief, or both, in circumstances where the information provided by the employer subsequently proves to be incomplete or incorrect.

Unforeseen ground conditions

The risk of unforeseen ground conditions is well known to the construction industry: 'It frequently occurs in practice, particularly in engineering contracts, that unexpected difficulties are encountered during construction which may not only necessitate a change from the expected method of working, but in extreme cases may mean that completion of the work, at least in accordance with the original design, is impossible.'[15]

The effects can be felt in terms of time and money: 'unforeseen site conditions… have an obvious capacity to cause delay and disruption to the performance of works on a construction or engineering project, and to cause an escalation in the contractor's costs.'[16]

Certain types of work such as tunnelling[17] have a greater propensity for being affected by ground conditions, but most structures have subsoil foundations of some kind, so the phenomenon of unforeseen ground conditions is widely applicable. It is therefore unsurprising that unforeseen ground conditions are one of the main candidates for advance allocation of risk[18] in construction and engineering contracts.[19] Accordingly, the potential time and cost consequences should be provided for and taken into account in the parties' forward planning, which includes tender pricing. In the FIDIC suite of contracts, the Red/MDB and Yellow forms characteristically seek a balanced allocation of risk through Sub-Clause 4.12 on Unforeseeable Physical Conditions and related provisions, both as to time and cost.[20] Unforeseen ground conditions are dealt with in a radically different way by the Unforeseeable Difficulties provisions of the Silver Book. (See also the section on 'Unforeseen ground conditions' below.)

Force majeure

In the course of a construction project, performance of the parties' obligations can be delayed, impaired or altogether prevented by events outside the parties' control.

All major legal systems have rules governing the impossibility or inhibition of performance of contractual obligations. The underlying law of the contract selected by the parties, or that which applies in the absence of such selection, is capable of providing remedies and other outcomes to some extent. There is often a significant difference between the civil law and common law traditions in this respect. The concept of *imprévision* has long formed a part of systems deriving from French law and the doctrine of *rebus sic stantibus* is expressly incorporated into the German Civil Code.[21] But, in the common law systems and notably in English law, there is no general theory of force majeure, which is not a term of art. The effect is that 'performance of the relevant obligation must have been prevented by an event of force majeure and not merely hindered or rendered more onerous.'[22] The test of frustration in construction (and other) cases was set out by the House of Lords in *Davis Contractors Ltd v. Fareham Urban District Council:*[23] '[F]rustration occurs whenever the law recognises that without default of either party, a contractual obligation has become incapable of being performed because the circumstances in which performance is called for would render it a thing radically different from that which was undertaken by the contract.'[24]

---

15 Nicholas Dennys QC and Robert Clay (eds), *Hudson's Building and Engineering Contracts*, 13th ed., Sweet & Maxwell, p. 402, (2015).
16 Julian Bailey (op. cit.), p. 697.
17 Ibid.
18 See Julian Bailey, 'What lies beneath: site conditions and contract risk', Society of Construction Law Paper 137 (2007).
19 See Ellis Baker and Michael Turrini, 'The underlying problem: negotiating the ground conditions issue', Society of Construction Law Paper 181 (2013).
20 There are some changes of structure in Sub-Clause 4.12 of the 2016 Pre-Release edition of the Yellow Book, but the philosophy is essentially as before.
21 Axel-Volkmar Jaeger and Götz-Sebastian Hök, FIDIC – *A Guide for Practitioners*, Springer, pp. 329 – 330 (2010).
22 Hugh Beale, *Chitty on Contracts*, 32nd ed., Sweet & Maxwell, p. 1227 (2015).
23 [1956] AC 696.
24 Lord Radcliffe at p. 729.

The difference in approaches between jurisdictions explains why parties to construction contracts routinely make their own express provision for force majeure. Under Clause 19 of the modern FIDIC contracts, for example, there is a mandatory notification procedure for force majeure events and potential relief available to both Parties. The treatment of force majeure under the FIDIC suite of contracts is discussed further below.

Indemnification and insurance

Neither indemnities nor insurance are risks to be allocated in the way unforeseen ground conditions or force majeure events are. They are, however, devices by which risk allocation can occur and are explained in this context.

In principle, indemnities can arise by operation of law, including statute, but this coverage is limited to indemnity clauses in contracts. 'The central characteristic of an indemnity clause is that the indemnifier assumes a primary responsibility for the adverse event covered by the clause and undertakes to hold the indemnified party harmless against the consequences of that event.'[25] The use of indemnity clauses in construction contracts has been described as 'governing or re-allocating ultimate contractual responsibility for third party claims as between Employer and Contractor.'[26]

Insurance is a mechanism by which risk can be allocated to a third-party insurer pursuant to a contract of insurance, for payment of a premium. In construction contracts, parties may mandate that counterparties hold certain insurances to protect such party against certain risks allocated to that party under the contract. Under the FIDIC suite of contracts, for example, Clauses 17 and 18 provide for the risks of certain events with the capacity to cause significant loss and to pre-allocate responsibility for guarding against them, principally by insurance, and for meeting such loss where this cannot be insured or recovered from insurance. (See the section on 'Indemnification and insurance for specific risk' below.)

Allocating specific risks—the FIDIC approach

Unforeseen ground conditions

The Red/MDB and Yellow Books

In the FIDIC Red and Yellow Books, the issue of 'unforeseen ground conditions', which is a common industry expression, is dealt with under the heading 'Unforeseeable Physical Conditions', which obviously is not identical. The FIDIC term[27] extends to 'natural physical conditions and man-made and other physical obstructions and pollutants, which the Contractor encounters at the Site when executing the Works, including sub-surface and hydrological conditions, but excluding climatic conditions.'[28] Although this formulation is wider than 'ground conditions', extending beyond geology, for example, to hydrology, it is also more restricted, in referring to 'unforeseeable' rather than 'unforeseen'. Unforeseeability is an objective test for those purposes, being defined[29] as 'not reasonably foreseeable by an experienced Contractor by the date for submission of the Tender'.[30]

The unforeseeability test is crucial to the risk allocation for ground conditions and other physical conditions in the FIDIC Red and Yellow Books and three aspects need to be considered in applying it.[31] First, the test is not what was actually foreseeable, but what would have been reasonably foreseeable. Second, the foreseeability is not that of the Contractor, but of an experienced Contractor, namely an industry standard. Third, the point in time to which the test refers is Tender Submission (Base Date for MDB), which means that it must be seen together with information available to the Contractor (Site Data)[32] and the 'correctness and sufficiency of the Accepted Contract Amount'[33] to obtain a full picture.

---

25 Gerard McMeel, *The Construction of Contracts*, 2nd ed., Oxford University Press, p. 563 (2011).
26 Nicholas Dennys QC and Robert Clay (eds) (op. cit.), p. 1110.
27 Significantly, the FIDIC provision begins by defining 'physical conditions'. This was a problematic omission from the 4th edition of the Red Book, noted by Jeremy Glover and Simon Hughes QC, *Understanding the FIDIC Red Book: A Clause by Clause Commentary*, 2nd ed., Sweet & Maxwell, p. 108 (2011).
28 Sub-Clause 4.12.
29 Sub-Clause 1.1.6.8.
30 In the MDB (Pink) version of the Red Book, 'Base Date' replaces 'Tender'.
31 Ellis Baker et al. (op. cit.), p. 88.
32 Sub-Clause 4.10.
33 Sub-Clause 1.1.4.1.

The issue of reasonable foreseeability by an experienced Contractor under Sub-Clause 4.12 of the Yellow Book was recently considered in the Gibraltar case of *Obrascon Huarte Lain SA v. Her Majesty's Attorney General for Gibraltar*,[34] where the (English) Technology and Construction Court (TCC) held that the Spanish contractor 'did not in fact encounter physical conditions in relation to contaminated soil over and above that which an experienced contractor could reasonably have foreseen by the date of submission of its tender',[35] applying a 'balance of probabilities' test. The Court of Appeal[36] upheld the TCC's analysis of this issue.[37]

Subject to compliance with Sub-Clause 20.1, if the Contractor can meet the requirements of Sub-Clause 4.12 for ground conditions it has experienced, it may be able to claim an extension of time for delay and payment of additional Cost, to be included in the Contract Price.

The FIDIC contracts: changing the risk allocation

Users of standard form contracts are not bound to accept the risk allocation for unforeseen ground conditions (or anything else). The Building Law Reports Commentary on *Obrascon*[38] warns that 'Contractors may want to consider whether or not they would be comfortable assuming the risk… or, rather, whether to propose bespoke specificity as to the nature of the ground conditions which are contemplated.'

In the Guidance Notes in the Red/Yellow Books, FIDIC has provided an alternative on the basis of the risk sharing, by which Sub-Clause 4.12(b) is replaced with a percentage allocation of Cost between the Contract Price and the Contractor respectively.

A much more thorough ongoing reallocation of ground risk (as part of Physical Conditions) is found in the FIDIC Silver Book. Under Sub-Clause 4.12, the Contractor is 'deemed to have obtained all necessary information as to risks, contingencies and other circumstances which may influence or affect the Works' so that the Contractor 'accepts total responsibility for having foreseen all difficulties and costs of successfully completing the Works' and the effect is that no addition to the Contract Price is payable.

Generally, the Contractor under the Silver Book bears the risk of unforeseen ground conditions, covered by the expression 'Unforeseen difficulties'. However, two qualifications must be made to this general proposition. First, the Employer is made responsible for certain data which it provides to the Contractor,[39] so that extension of time could be claimable for error in certain circumstances,[40] although there is no express entitlement to any additional payment.

Second, depending on the law selected by the Parties as stated in the Particular Conditions, the effect of the provisions may be in doubt.[41] For example, strong reservations have been expressed[42] as to whether the transfer of risk to the Contractor is enforceable under German law in circumstances where the Employer has provided incorrect information on ground conditions.[43]

Force Majeure

The main Force Majeure provisions[44] in the FIDIC contracts are basically the same for the Red, Yellow and Silver Books.[45] 'Force Majeure' is defined[46] as 'an exceptional event or circumstance'. Force Majeure does not have to be unforeseeable or even unforeseen.[47]

---

34 [2014] EWHC 1028 (TCC).
35 Para 227.
36 [2015] BLR 521.
37 A recent discussion of Australian and English cases can be found in Gordon Smith 'Latent Conditions and the Experienced Contractor Test', International Construction Law Review, pp. 390 – 412 (2016).
38 [2014] BLR pp. 488 – 489.
39 Sub-Clause 5.1.
40 For commentary, see Ellis Baker et al. (op. cit.), p. 92.
41 Peter Fenn 'Review of international practice on the allocation of risk of ground conditions', International Construction Law Review, pp. 439 – 453 (2000).
42 Alexander Kus, Jochen Markus and Ralf Steding 'FIDIC's new Silver Book under the German Standard Form Contract Act', International Construction Law Review, pp. 533 – 550 (1999).
43 Axel-Volkmar Jaeger and Götz-Sebastian Hök (op. cit.), p. 107, provides a commentary on the German law position in relation to these types of risk allocation.
44 Clause 19.
45 Jeremy Glover and Simon Hughes QC (op. cit.).
46 Sub-Clause 19.1.
47 The FIDIC Contracts Guide, p. 292 (2000).

However, it must be:

- beyond a Party's control;
- beyond reasonable provision by a Party before entering into the Contract;
- not reasonably capable of being avoided or overcome; and
- not substantially attributable to either Party.

A non-exhaustive list is given of possible 'exceptional events or circumstances':

- war, hostilities, invasion, enemy action;
- rebellion, terrorism, insurrection, coup d'état or civil war;
- riots and other civil/industrial disorder;
- munitions, explosives, radiation or contamination (except as attributable to the Contractor); and
- natural catastrophes, such as earthquake, hurricane, typhoon or volcanic activity.

A Party prevented from performing its contractual obligations[48] by a Force Majeure event or circumstance must give notice to the other Party within 14 days of when it did, or should have, become aware of it.[49] The Party is excused performance of its obligations while prevented from doing so.

Additionally, a Contractor may be entitled to further relief[50] if it incurs additional delay or Cost,[51] in the form of an extension of time or additional payment.

Although the obligation to give a Force Majeure notification is owed by both Parties, and the provision as to Optional Termination, Payment and Release[52] can apply to either Party, the balance of risk allocation in the FIDIC contracts can generally be said to favour the Contractor, as it is more likely to be relieved of its obligations.

Indemnification and insurance against specific risk

The indemnity and insurance provisions of the FIDIC contracts[53] need to be read together to obtain a comprehensive view of the allocations made.

Indemnities

In the FIDIC suite of contracts, Clause 17 uses indemnities as the medium for risk allocation on a range of issues. The net effect is complex. Indemnities are given by both Employer and Contractor, and some of them are reciprocal. Thus the Contractor gives to the Employer an indemnity against all third party claims for personal harm and damage to property arising out of activities or personnel for which it is responsible, and the Employer gives a similar, though not identical, indemnity to the Contractor.[54] More of Clause 17 is devoted to indemnities by the Contractor, including responsibility for Care of the Works,[55] which has no Employer equivalent. The Contractor is liable for loss or damage during the period from Commencement Date to the issue of the Taking Over Certificate, except where it has a cause classified as an Employer's Risk.[56] But it would be an over-simplification to say that the indemnity provisions under the FIDIC contracts favour the Employer. Wherever loss or damage to the Works or other aspects of the project results from an Employer's Risk, the Contractor may be able to claim an extension of time for delay, or additional Cost, or both, to be added to the Contract Price.[57]

Further complexity is added by differences between the FIDIC contracts. While all books include foreign hostilities, civil conflict, riots/disorder, explosions/contaminations/radiation and sonic damage by aircraft,[58] the Silver Book significantly omits three categories of Employer Risk found in the Red and Yellow Books;[59] use or occupation by the Employer, design of any part of the Works by

48 In the MDB (Pink) Book 'substantial obligations' rather than 'obligations'.
49 Sub-Clause 19.2.
50 Sub-Clause 19.4.
51 As defined by Sub-Clause 1.1.4.2.
52 Sub-Clause 19.6.
53 Clauses 17 and 18.
54 Sub-Clause 17.1.
55 Sub-Clause 17.2.
56 Sub-Clause 17.3.
57 Sub-Clause 17.4.
58 Sub-Clause 17.3.
59 See Ellis Baker et al. (op. cit.), p. 346.

personnel for whom the Employer is responsible and 'Unforeseeable[60] operation of forces of nature'. The MDB version of the Red Book adds to the first paragraph of Sub-Clause 17.3 the words 'insofar as they directly affect the execution of the Works in the Country'. When compared with the Red Book itself 'the effect of this is to narrow further the nature of the 'Employer risks'.[61]

Much of the remaining Risk and Responsibility provisions can be regarded as fairly balanced in terms of risk allocation. The indemnities for infringement of intellectual property rights[62] are essentially reciprocal. The exclusion of liability for 'any indirect or consequential loss'[63] applies to both Parties. There is provision for the Contractor's total liability to be limited to a stated amount; the amount is the subject of express provision, usually included in the Particular Conditions following negotiation.

Insurance

The insurances to be effected under the FIDIC forms of contract are basically against loss or damage to Works and Contractor's Equipment,[64] personal injury and damage to property of third parties[65] and personal injury to the Contractor's Personnel.[66]

'Generally, the FIDIC forms assume that the Contractor will be responsible for effecting and maintaining the insurances,'[67] although either Party can do so by provision in the Particular Conditions; third-party personal injury or damage to property insurance must be in the joint names of the Parties. If the Contractor does take out the insurances, the Employer is entitled[68] to approve both the insurers and terms of the policies. There is no equivalent entitlement where the Employer is the insurer.

What cover is actually obtained will depend to some extent on what is available in the market and at what cost. However, the insuring party, whether Contractor or Employer, must insure against loss or damage to Works and Goods 'for not less than the full reinstatement cost including the costs of demolition, removal of debris and professional fees and profit'.

The required scope of this cover needs to be seen in conjunction with the Employer's Risk provisions, which as indicated above: 'shall cover all loss and damage from any cause not listed in Sub-Clause 17.3',[69] subject to any Particular Conditions. Insurance for Contractor's Equipment[70] has to be for 'not less than the full replacement value, including delivery to Site'.

The required scope of the insurance against personal injury and damage to property of third parties is also defined by reference to Sub-Clause 17.3, it being permissible to exclude liability to the extent that it arises from 'a cause listed in Sub-Clause 17.3 [Employer's Risks], except to the extent that cover is available at commercially reasonable terms'.

Indemnification and insurance—summary

The Risk and Responsibility provisions[71] are principally, though not exclusively, indemnities. The risk allocation can be broadly characterised as balanced, and several of the provisions are reciprocal or apply equally, as in the case of the exclusion of indirect or consequential loss. The Contractor is offered relief in the form of time, money, or both, from its Care of the Works liabilities[72] by the Employer's Risks provision,[73] which resembles a list of force majeure events.

60 Defined by Sub-Clause 1.1.6.8 as 'not reasonably foreseeable by an experienced contractor by the date for submission of the Tender'.
61 Jeremy Glover and Simon Hughes QC (op. cit.), p. 342.
62 Sub-Clause 17.5.
63 Sub-Clause 17.6.
64 Sub-Clause 18.2.
65 Sub-Clause 18.3.
66 Sub-Clause 18.4.
67 Ellis Baker et al. (op. cit.), p. 368.
68 Sub-Clause 18.1.
69 Sub-Clause 18.2(c).
70 Defined in Sub-Clause 1.1.5.1.
71 Clause 17.
72 Sub-Clause 17.2.
73 Sub-Clause 17.3.

The Employer's Risks provisions have a key role in the interpretation of the Insurance requirements, whose complexity and numerous carve-outs and exceptions make generalisation about balance of risk allocation extremely difficult.[74]

As a general proposition, it can be said that the Parties agree to insure those risks as to damage, injury and third party liability which are insurable, and to pre-allocate responsibility for those which are not to be insured, or cannot be. There is a presumption that the Contractor will take responsibility for obtaining insurance, but this, and much of the question of scope of cover, can be agreed by the Parties and made the subject of Particular Conditions.

The allocation of risk in a construction project—summary

Accurate risk identification and a fair and equitable allocation of risk are essential to ensuring the successful delivery of a project. Both the employer and the contractor must work co-operatively to seek an equitable sharing of risk based on an appropriate procurement methodology and seek to allocate typical risks in an efficient manner, in the light of the nature of the particular project and its specific considerations. In doing so, the intention is that the potential for frustration of the project schedule and the incidence of construction disputes will be reduced, to the benefit of all parties.

The FIDIC contracts represent 'international benchmarks' in terms of risk allocation. However, these vary notably between the different procurement methods offered by the FIDIC suite. If the Red and Yellow Books are reckoned to offer 'balanced' risk allocation, the Silver Book places significantly more risk on the EPC/Turnkey Contractor. In any event, the risk allocation in the FIDIC General Conditions can be further modified by the use of Particular Conditions.

74 For detailed commentary, see Ellis Baker et al. (op. cit.), pp. 371 – 378.