

# Introduction to the FIDIC Suite of Contracts

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## The history of the FIDIC suite

The Fédération Internationale Des Ingénieurs-Conseils<sup>1</sup> (FIDIC) was founded in Belgium in 1913. Since then, it has become the foremost representative body for the world's consulting engineers, with member associations in some 100 countries.

Although the Contracts Committee became one of its earliest constituent parts soon after FIDIC's foundation, it was not until 1957 that the first FIDIC standard form contract was produced.

The first contract, known as the *Red Book* first edition<sup>2</sup>, was not actually drafted by FIDIC but was instead an authorised 're-badging' by FIDIC, of the ICE Conditions of Contract fourth edition, published by the Institution of Civil Engineers. This was itself an 'international' contract in the sense that it had been adopted by the Association of Consulting Engineers (ACE) as such. Although the modern FIDIC forms have developed very significantly since the 1950s, it is still relevant to note that '[t]he Red Book is based on a domestic contract'.<sup>3</sup>

These common law origins continue to be used as a criticism by some commentators, especially in civil law jurisdictions, who are sceptical of FIDIC's entitlement to its paramount position, though the *Silver Book*, for example, owes relatively little to an English heritage. Successive editions of the Red Book were issued in 1969<sup>4</sup>, 1977<sup>5</sup> and 1987<sup>6</sup>.

The other long-established FIDIC contract is the *Yellow Book*<sup>7</sup>, first produced in 1963 and with subsequent editions in 1980<sup>8</sup> and 1987<sup>9</sup>, which is the design and build equivalent of the employer design *Red Book*.

In the mid-1990s, two significant landmarks occurred in the history of the development of the FIDIC Contracts. These were the introduction of a turnkey contract, the *Orange Book*, and the setting up of a task group to produce a major revision of the Red and Yellow Books. These events led to the launch in 1999 of the so-called 'Rainbow Suite' from the colours of the covers of the respective Books: Red, Yellow and Silver<sup>10</sup>.

In December 2017, 18 years after FIDIC released its First Edition Rainbow Suite in 1999, FIDIC published Second Editions of the Red, Yellow and Silver Books as updates to the First Editions. The introduction of the

<sup>1</sup> The International Federation of Consulting Engineers.

<sup>2</sup> Conditions of Contract for Works of Civil Engineering Construction, 1957.

<sup>3</sup> Dr Nael Bunni The FIDIC Forms of Contract 3rd ed Ch.2 Blackwell Publishing (2005).

<sup>4</sup> 2nd ed.

<sup>5</sup> 3rd ed.

<sup>6</sup> 4th ed., as reprinted in 1988 and 1992 with editorial amendments.

<sup>7</sup> Conditions of Contract for Plant and Design-Build for Electrical and Mechanical Plant and for Building and Engineering Works Designed by the Contractor.

<sup>8</sup> 2nd ed.

<sup>9</sup> 3rd ed.

<sup>10</sup> As stated below, the Green Book, FIDIC's short form of contract, also has a claim to be considered as part of the Rainbow Suite, as it was issued in 1999.

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2017 Rainbow Suite was a significant landmark in the development of international contracting for major infrastructure projects worldwide.

## An Overview of the Leading FIDIC Contracts: Red, Yellow and Silver Books

During 2018 and for the immediate future, the principal FIDIC contracts are in a state of transition. The official position is quite straightforward. The current versions of the Red, Yellow and Silver Books are the second editions, which were launched by FIDIC in London<sup>11</sup> on 5 December 2017. However, the reality is that the contracts in widespread use at the time of writing are those of the 1999 Rainbow Suite, a situation which is likely to continue for some time to come.

It is therefore necessary to provide short accounts of the 1999 Red, Yellow and Silver Books, before offering an introduction to their 2017 successors.

### The 1999 Rainbow Suite: Red, Yellow and Silver Books

One of the strengths of the FIDIC contracts has been consistency of structure. The 1999 Red, Yellow and Silver Books share the same 20-clause format and, so far as possible, the clause numbers correspond to their equivalents in each book. However, the individual contracts reflect quite different approaches to construction procurement and these extend to divergences in detailed provisions.

The Contract is formed using the Red or Yellow Books by the exchange of Letter of Tender and Letter of Acceptance: the Silver Book equivalent is the Parties' execution of the Contract Agreement. The design of the Works is set out as a Specification<sup>12</sup> or the basis for the design provided in the Employer's Requirements<sup>13</sup> Crucially, there will be Particular Conditions, which are specific to the project in question. The explanation of the characteristics and features of the individual contracts below refers to the General Conditions.

FIDIC has prepared translations of the 1999 Red, Yellow and Silver Books into selected languages, partly to deal with the problems caused by unofficial, and often very inaccurate, translations. The Red, Yellow and Silver Books have all been translated into Arabic, Chinese, French, Polish, Portuguese, Romanian, Russian, Spanish, Turkish and Vietnamese. A further nine European languages (Bosnian, Croatian, Estonian, Hungarian, Italian, Latvian, Lithuanian, Serbian and Slovak) have at least one contract translated, as do three Asian languages (Bahasa Indonesia, Japanese and Mongolian). There are guidance notes in German.

### The Conditions of Contract for Construction for Building and Engineering Works Designed by the Employer: the 1999 Red Book

The *Red Book* is not only the oldest of the FIDIC contracts, celebrating its 60th anniversary in 2017; it is also the most widely used for general construction projects of many kinds. The single most important characteristic of the *Red Book* is contained in its full title: it is an employer design contract. The design, prepared by the Employer's staff or by consultants acting on its behalf, is provided to the Contractor in the form of Specifications and Drawings (and any Schedules). The payment mechanism<sup>14</sup> is traditional measurement and valuation. However, it is open to the Parties to vary this position. FIDIC advises<sup>15</sup> of 'the possibility of replacing Clause 12 by appropriate Particular Conditions for a lump-sum contract or a cost-plus contract'<sup>16</sup>. Also traditional is the role of the Engineer: 'who shall carry out duties assigned to him by the Contract'.<sup>17</sup> It may seem paradoxical that the Engineer's duties, including such important functions as the making of determinations<sup>18</sup>, should be usually much more fully set out in the Contract, to which the Engineer is not a Party, than in the contract for professional services (or employment contract) which governs the relationship between employer and engineer. This is regarded as normal in common law jurisdictions, but the 'dual role' of

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<sup>11</sup> At the 30th FIDIC Users Conference.

<sup>12</sup> 1999 Red Book.

<sup>13</sup> 1999 Yellow and Silver Books.

<sup>14</sup> Clause 12.

<sup>15</sup> The FIDIC Contracts Guide, p. 205 (2000).

<sup>16</sup> Guidance for the Preparation of Particular Conditions No 14.

<sup>17</sup> Sub-Clause 3.1.

<sup>18</sup> Sub-Clause 3.5.

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the Engineer as agent of the Employer, and as a decision-maker acting fairly between the Parties, is sometimes regarded with misgivings in civil law jurisdictions<sup>19</sup>.

In other respects, the 1999 *FIDIC Red Book* follow in the line of its predecessors as an engineering contract in the common law style. Glover and Hughes provide a brief outline of the 20-clause structure<sup>20</sup> and further analysis of specific aspects of its content is provided in Chapter 5, 'Allocation of Risk in Construction Contracts'. A departure from that tradition is found in the replacement of the dispute-resolution function of the Engineer by a Dispute Adjudication Board (DAB)<sup>21</sup>. This mechanism had first been introduced by FIDIC in 1995 in the *Orange Book*<sup>22</sup>. It is found in Clause 20 of the 1999 Red, Yellow and Silver Books, though not in identical form. In the *1999 Red Book*, the DAB is appointed<sup>23</sup> by the Parties at the outset of the project, allowing its members to become familiar with its progress and challenges.

### The Conditions of Contract for Plant and Design Build for Electrical and Mechanical Plant and for Building and Engineering Works designed by the Contractor: the *1999 Yellow Book*

The *Yellow Book* is FIDIC's second-oldest contract, and almost certainly its second most widely used, for electrical and mechanical plant and also for design and build work more generally. As with the *Red Book*, the contract's most important feature is contained within the full title; it is FIDIC's principal contractor design contract<sup>24</sup>. The design is prepared by the Contractor in accordance with the Employer's Requirements, which specify 'the purpose, scope and/or design and/or other technical criteria for the Works.'<sup>25</sup> The Contractor accepts a fitness-for-purpose obligation<sup>26</sup> for the Works, including the design. The payment mechanism for the *Yellow Book* is lump sum fixed price, with provision for progress payments on the basis of Engineer certification. Like the *Red Book*, the *Yellow Book* contract is administered by the Engineer (see above).

A major difference is evident from the Clause 20 dispute resolution provisions. Whereas the *Red Book* provides for a 'standing' DAB to be appointed 'by the date stated in the Appendix to Tender,' under the 1999 *Yellow Book*<sup>27</sup>, the Parties 'jointly appoint a DAB by the date 28 days after a Party gives notice to the other Party of its intention to refer a dispute to a DAB.' This is known as an 'ad hoc' DAB and can be criticised as losing one of the major advantages of the DAB model, namely, the ability of the members to become familiar with the project and the personnel engaged on it. It has been suggested that the disparity is explained by the difference in the type of projects for which the Red and Yellow Books are respectively used.<sup>28</sup>

The *Yellow Book* has long been one of FIDIC's most important contracts. The content of its earlier editions influenced the *Silver Book* to some extent and also the *Gold Book*<sup>29</sup>, both of which are based on the contractor design concept. Its risk allocation (see Chapter 5, 'Allocation of Risk in Construction Contracts') resembles more the *Red Book* in terms of the perception of traditional balance between Employer and Contractor.

### The Conditions of Contract for EPC/Turnkey Projects: the *1999 Silver Book*

The *1999 FIDIC Silver Book* is the third of the major Rainbow Suite contracts. It was the most controversial upon its launch and to some extent remains so. This is largely attributable to perceptions of its risk allocation.

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<sup>19</sup> For a civil law perspective of this issue, see Axel-Volkmar Jaeger and Götz-Sebastian Hök, *FIDIC – A Guide for Practitioners*, Springer, pp. 103-104 (2010).

<sup>20</sup> Jeremy Glover and Simon Hughes QC, *Understanding the FIDIC Red Book: A Clause-by-Clause Commentary*, 2nd ed., Sweet & Maxwell, pp. xvi-xix (2011).

<sup>21</sup> Sub-Clauses 20.2-20.4.

<sup>22</sup> Conditions of Contract for Design-Build and Turnkey, 1st ed. (1995).

<sup>23</sup> Sub-Clause 20.2.

<sup>24</sup> Though not the only one: see also Silver and Gold Books.

<sup>25</sup> Sub-Clause 1.1.1.5.

<sup>26</sup> Sub-Clause 4.1

<sup>27</sup> Sub-Clause 20.2.

<sup>28</sup> See Ellis Baker, 'Is it all necessary? Who benefits? Provision for multi-tier dispute resolution in international construction contracts' Society of Construction Law Paper No. 154 p. 12 (2008).

<sup>29</sup> The Conditions of Contract for Design, Build and Operate Projects, 2008.

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FIDIC's first turnkey contract was the *Orange Book*<sup>30</sup> but the *Silver Book* was seen as a greater departure from the traditional FIDIC contracts which preceded the 1999 Rainbow Suite.

Essentially, the *Silver Book* is a lump sum EPC turnkey contract. As with the *Yellow Book*, the design is prepared by the Contractor in accordance with the Employer's Requirements.<sup>31</sup> The Contractor assumes full responsibility for the engineering, procurement and construction of the Works and undertakes a fitness for purpose obligation for the Works, including the design. Unlike the Red and Yellow

Books, the Contract is not administered by an Engineer; there is no such appointment. Instead, decisions are made and other contract administration functions performed, by the Employer, with or without an Employer's Representative. This form of contracting is typically used on complex engineering facilities, such as process or power plants, where a high degree of certainty as to cost, time and performance is required, often because of 'bankability' issues in funding the project. The concept is that the Employer obtains a fully functioning facility, capable of operating immediately to guaranteed standards of performance, i.e., ready at the 'turn of a key'.

In these respects, the *Silver Book* is typical of its kind. FIDIC justified its 1999 launch, and the perceived break with balanced risk allocation, purely as a pragmatic response to market demand. In the words of the Chairman of the Contracts Committee, 'FIDIC felt that the best service it could give to the industry at this time would be to come out into the open with a standard form to satisfy those needing more security of final cost and time than FIDIC's traditional forms can give'.<sup>32</sup> Therefore, 'the more risks a contractor is required to bear, the higher the 'premium' a prudent contractor must add to his price to cover his extra risk taking.'<sup>33</sup> FIDIC's position, then, was that the *Silver Book* is simply a different vehicle for the procurement of engineering projects and that there is no question of unfairness in the greatly altered balance of risk allocation. Some of the responses from representatives of the contracting industry purported to regard the publication of the *Silver Book* as indicative of anti-contractor animus on the part of FIDIC. The European International Contractors<sup>34</sup> organisation was consulted by FIDIC in the process of preparing the 1999 Rainbow Suite, but proceeded to publish its very critical Guide, complaining of 'the *Silver Book's* departure from the traditional FIDIC contractual and risk-sharing philosophy'.<sup>35</sup> Some of the criticism published by others was more intemperate still; 'Contractors will seek and likely find ways to recover compensation for risk they should not have been required to assume, litigation will increase, not decrease, and projects will suffer.'<sup>36</sup> While the *Silver Book*, in keeping with the EPC turnkey concept, allocates much more risk to the Contractor than in more 'balanced' contracts, such as the Red and Yellow Books, it should not be regarded in emotive terms. Contractors routinely do price for the varying degrees of risk allocation in contracts. The omission of the Engineer from a FIDIC form of contract was inevitably remarked on and the absence of the beneficial effect of the Engineer's contract administration might often be felt in the conduct of the project. However, the Parties will always have made the choice with their 'eyes open' and, like all contracts, a contract under the *Silver Book* will have been freely entered into. In the final analysis, it has been no more than an extension of the range of choice in the FIDIC suite and should be seen in this context.

## The 2017 Editions of the Red, Yellow and Silver Books

The new suite of FIDIC contracts comprises new editions (described by FIDIC as second editions) of the Red, Yellow and Silver Books. Conceptually, the new versions are similar to their 1999 predecessors: the *Red Book* is FIDIC's 'traditional procurement' employer design contract, the *Yellow Book* has the dual function of design-and-build/contractor design and mechanical/electrical plant procurement, and the *Silver Book* is FIDIC's EPC/ Turnkey Contract.

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<sup>30</sup> See Section 1 above.

<sup>31</sup> Sub-Clause 1.1.1.3.

<sup>32</sup> Christopher Wade 'The Silver Book: The Reality' International Construction Law Review, Vol. 18, Part 3 p.501. (2001).

<sup>33</sup> Christopher Wade (op. cit.), p. 508.

<sup>34</sup> A federation of construction industry bodies from 15 European countries.

<sup>35</sup> Commentary on the EIC Guide by the Chairman of the EIC Conditions of Contract Working Group: Frank Kennedy, EIC Contractor's Guide to the FIDIC Conditions of Contract for EPC Turnkey Projects (The Silver Book). International Construction Law Review Part 4, p. 505 (2000).

<sup>36</sup> Anthony Gaede Jr., 'The Silver Book: an unfortunate shift from FIDIC's tradition of being even-handed and of focusing on the best interests of the project' International Construction Law Review, Part 4, p. 502 (2000).

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However, the 1999 contracts have been substantially revised and the 2017 editions represent a significantly different proposition for an intending user to consider.

## Generally

The contracts have been greatly expanded. The 1999 forms were each about 60 pages long, with some 20 pages of guidance notes. Each of the 2017 contracts is over 100 pages long with more than 40 pages of guidance notes. The familiar 20-clause structure has been replaced by 21 Clauses in all three Books.

A striking new feature of the 2017 forms is the inclusion of a set of criteria known as the Golden Principles (GPs).<sup>37</sup> Their purpose is to act as a benchmark which must be met if a contract is to be regarded as a FIDIC contract. This may be in doubt if, for example, the Employer has undertaken heavy amendment of key provisions, whether with or without FIDIC's licence to do so.

The GPs<sup>38</sup> are:

- GP1 The duties, rights, obligations, roles and responsibilities of all the Contract Participants must be generally as set out in the General Conditions and appropriate to the project.
- GP2 Particular Conditions must be clear and unambiguous.
- GP3 The Particular Conditions must not change the balance of risk/reward allocation provided for in the General Conditions.
- GP4 All specified time periods must be reasonable.
- GP5 All formal disputes must be referred to a DAAB<sup>39</sup> as a condition precedent to arbitration.

These are not of legal effect but will no doubt be relied upon by parties in negotiation to support their contention that a contract is or is not to be regarded as a 'real' FIDIC contract. While GPs 1, 2 and 4 are straightforward, GPs 3 and 5 may be somewhat problematic in this respect, since Particular Conditions frequently change the risk allocation of the General Conditions, while the Parties, especially in the Middle East states, have sometimes wished to dispense with the DAB under the 1999 forms, as unjustified in terms of expense and complexity.

## Specific Revisions

The major changes in the Red, Yellow and Silver Books can be classified under three main themes:

- Product, Risk Allocation and Time;
- Contract Administration and Claims; and
- Dispute Avoidance and Resolution.

### Product, Risk Allocation and Time

The 1999 Yellow and Silver Books contained<sup>40</sup> limited fitness for purpose obligations, which, for example, did not apply if the purpose was not stated in the Employer's Requirements. The 2017 Yellow and Silver Books contain much stronger fitness for purpose obligations, which apply even where no purpose is expressly stated<sup>41</sup> and which are supported by indemnities by the Contractor in respect of acts, errors and omissions in design.<sup>42</sup> The Contractor is expected to maintain professional indemnity insurance against liability arising from breach of its obligations in this respect, if required by the Contract Data.<sup>43</sup>

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<sup>37</sup> Produced by FIDIC's Task Group 15, which reported to the FIDIC Contracts Committee.

<sup>38</sup> Contained in the Guidance for the Preparation of Particular Conditions, p.8 of each of the three 2017 editions.

<sup>39</sup> Dispute Avoidance/Adjudication Board (DAB in 1999 editions) Sub-Clause 1.1.22 Red and Yellow Books, Sub-Clause 1.19 Silver Book.

<sup>40</sup> Sub-Clause 4.1 in both.

<sup>41</sup> Sub-Clause 4.1 (Contractor's General Obligations).

<sup>42</sup> Sub-Clause 17.4 in both.

<sup>43</sup> Sub-Clause 19.2 in both.

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A deficiency of the 1999 Rainbow Suite was the absence of performance liquidated damages in the Tests on Completion, which have for some time been a feature of bespoke international construction contracts. The 2017 versions enable the Parties to agree Performance Damages in the Schedule of Performance Guarantees and, if the Tests are failed on/after Completion, the Employer is entitled to payment in full satisfaction of the failure.<sup>44</sup>

The most important area of change regarding risk allocation is limitation of liability. In addition to exclusion of indirect and consequential loss (with certain exceptions), FIDIC provides a choice between two alternative regimes. The basic position is that under the General Conditions total liability is capped at the sum stated in the Contract Data<sup>45</sup> or, if none, the Accepted Contract Amount<sup>46</sup> or Contract Price<sup>47</sup> (with certain exceptions). However, FIDIC offers an alternative in the Guidance for Preparation of Particular Conditions<sup>48</sup> providing for separate liability caps for consequential losses and capping of the Contractor's liability for other losses at the value of insurance cover for each, which is a completely different approach.

So far as risk of loss is concerned, the 2017 versions have been something of a surprise. The *FIDIC Design Build Operate Gold Book 2008* (see below) had introduced an entirely new system by which all risks were allocated between the Parties, rather than just loss or damage; the *Gold Book's* risk allocation Clause<sup>49</sup> distinguished between Employer's commercial risks, Employer's risks of damage and Contractor's risks. It had been widely expected that the *Gold Book* approach would be followed in the preparation of the new editions of the Rainbow Suite forms, a view encouraged by the Pre-Release editions of the *Yellow Book*.<sup>50</sup> However, the 2017 editions revealed that this approach was abandoned by FIDIC in favour of a conventional care of the works Clause<sup>51</sup>, by which the Contractor is made fully responsible for care of the Works, subject to certain express exceptions. One of these express exceptions is the category of 'Exceptional Events'<sup>52</sup> which has replaced 'Force Majeure', though the meaning of 'an event or circumstance' is somewhat similar to the Force Majeure provisions of the 1999 contracts, with the notable addition of 'tsunami' to 'natural catastrophes'.

The crucial question of time has received significant new provisions in the 2017 forms. FIDIC now offers the possibility of an additional Sub-Clause<sup>53</sup> allowing the Employer to designate Milestones, which would have to be completed by specified dates, failing which, Delay Damages would be payable. A second major departure relates to programming. The 1999 programming provisions were generally regarded as outdated and they have been replaced by a much more detailed and prescriptive programme Clause.<sup>54</sup> Some commentators expected that FIDIC would take the opportunity of the new contracts to deal expressly with the issue of concurrent delay, which is a source of uncertainty in many jurisdictions. For example, the Australian standard form AS 4000 gives the contract administrator the power to apportion responsibility for delay as between Employer and Contractor to determine entitlement for an extension of time. FIDIC has by contrast made no such provision in the 2017 General Conditions, leaving the Parties free to agree arrangements as a Particular Condition, otherwise the Contractor's entitlement is to be assessed 'as appropriate taking due regard of all relevant circumstances'.<sup>55</sup>

In contract administration, there have been very significant developments of the 1999 forms. In the 1999 Red and Yellow Books<sup>56</sup>, there was a distinction between situations where the Engineer was 'deemed to act for the Employer' and those where, in making determinations<sup>57</sup>, the Engineer had a duty to act fairly. This basis is preserved in the 2017 editions. However, in making a determination now, the Engineer is under a duty to act

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<sup>44</sup> Sub-Clause 12.4 of the Yellow and Silver Books 2017.

<sup>45</sup> Sub-Clause 1.15 in the Red and Yellow Books and Sub-Clause 1.14 in the Silver Book.

<sup>46</sup> Red and Yellow Books.

<sup>47</sup> Silver Book.

<sup>48</sup> 2017 Red Book pp.16-18, 2017 Yellow Book pp.16-17, 2017 Silver Book pp. 17-18.

<sup>49</sup> Clause 17.

<sup>50</sup> At the FIDIC Users Conferences in London (December 2016) and Abu Dhabi (February 2017).

<sup>51</sup> Sub-Clause 17.1 2017 Red, 2017 Yellow and 2017 Silver Books.

<sup>52</sup> Sub-Clause 18.1 2017 Red, 2017 Yellow and 2017 Silver Books.

<sup>53</sup> In the Guidance for the Preparation of Particular Conditions.

<sup>54</sup> Sub-Clause 8.3 in 2017 Red, Yellow and Silver Books.

<sup>55</sup> Sub-Clause 8.5 in 2017 Red, Yellow and Silver Books.

<sup>56</sup> Sub-Clause 2.6.

<sup>57</sup> Sub-Clause 3.5.

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neutrally and is not deemed to act for the Employer. FIDIC explains this new obligation on the Engineer as a duty to treat both Parties 'even-handedly, in a fair minded and unbiased manner'.<sup>58</sup>

The *Silver Book* embodies a completely different model of contract administration; this has also been the subject of major change. Under the *1999 Silver Book*, there was no Engineer; contract administration was undertaken by the Employer, who might appoint an Employer's Representative to act on its behalf, and the Employer was obliged to act fairly. The *2017 Silver Book* requires<sup>59</sup> the Employer to appoint an Employer's Representative, who must act fairly and who is not deemed to act for the Employer. It can therefore be said that the *2017 Silver Book* will always be administered by the Employer's Representative, and not the Employer; there is thus some resemblance to the role of the Engineer under the 2017 Red and Yellow Books, though the duty in making a determination is to be fair, with no mention of 'neutrality'.

One of the most controversial aspects of the 1999 Rainbow Suite contracts was the time-bar provision, by which failure to give notice of a claim within 28 days would result in a Contractor losing its entitlement to an extension of time or additional payment, whereas the Employer had only to make a claim 'as soon as practicable'. The Multilateral Development Bank (MDB) version of the *Red Book* (see below) instituted a 28 day time limit for Employers' claims, but without the sanction of loss of entitlement for non compliance. FIDIC has tried to address the main criticism of the 1999 claims procedures. The provision<sup>60</sup> is over three times as long as its predecessor and is remarkably complex. Both Contractors' and Employers' Claims are now subject to a 28-day time limit, though its enforcement has been assimilated with the power of the Engineer to determine Claims.<sup>61</sup> The effect of the rules on submission of notice, fully detailed claims and extension is such that up to 168 days may elapse between the original 'event or circumstance' and the determination by the contract administrator.

A distinctive feature of the 1999 FIDIC contracts was the role of the DAB in the dispute resolution process. This differed between the *Red Book*, which provided for a 'standing' DAB throughout the currency of the Contract, and the *Yellow and Silver Books*, where an 'ad hoc' DAB would be appointed only following the occurrence of a dispute. The 2017 contracts represent a decisive departure from the ad hoc model. The greater emphasis on dispute avoidance, evidenced in the 1999 DAB becoming a Dispute Avoidance/Adjudication Board (DAAB) in the 2017 forms, has contributed to the uniform provision in favour of standing boards for all contracts. The Parties can now, following the example of the *Gold Book*, obtain the assistance of the DAAB throughout the project, both for the avoidance of disputes and in the 'real-time' resolution of disputes as and when they arise. FIDIC has also taken the opportunity to address what has become known as the Persero issue, after litigation in the Singapore courts.<sup>62</sup> The question was whether failure to comply with a binding (but non-final) DAB decision had to be referred back to the DAB and all the stages of the Clause 20 process.<sup>63</sup> This is now dealt with by Sub Clause 21.7, enabling the non-defaulting Party to refer the non-compliance directly to arbitration.

Following the DAAB stage, the amicable settlement stage of the dispute resolution process was firmly established in the 1999 FIDIC forms.<sup>64</sup> It has maintained its position in the 2017 forms, though the reduction of the time period for amicable settlement from 56 days to 28 days was unexpected. More predictable has been the encouragement in the 2017 Guidance for Preparation of Particular Conditions to consider reference to senior executives, mediation, expert determination or some other form of ADR.

The 2017 editions of the Red, Yellow and Silver Books can be characterised as comprehensive and robust versions on FIDIC's most important standard forms. They contain a number of significant improvements as well as some apparent weaknesses. Their complexity is likely to be a major factor in deciding whether the new contracts are widely used, or used only for the largest projects.

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<sup>58</sup> Guidance for the Preparation of Particular Conditions, p.21., 2017 Red and Yellow Books.

<sup>59</sup> Sub-Clause 3.5.

<sup>60</sup> Sub-Clause 20.1 2017 Red, Yellow and Silver Books.

<sup>61</sup> Employer's Representative under the Silver Book.

<sup>62</sup> PT Perusahaan Gas Negara (Persero) TBK v CRW Joint Operation [2005] SGCA 30.

<sup>63</sup> See Christopher Seppala 'Singapore Continues to a Better Understanding of the FIDIC Disputes Clause: The Second Persero Case'. *International Construction Law Review*, Vol. 32, Part 11 p. 4 (2015).

<sup>64</sup> Sub-Clause 20.5 1999 Red, Yellow and Silver Books.

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## The Other FIDIC Construction Contracts

The Core FIDIC contracts have been introduced above: the Red, Yellow and Silver Books, in their 1999 Rainbow Suite editions and their 2017 second editions. The following identifies the other FIDIC contracts. This treatment does not mean that they are unimportant – the reverse is true of nearly all – but that their significance is more specific to a particular type of project or sector.

### The MDB Pink Book

The *FIDIC Red Book* was used widely, over many years, on development projects funded by banks as part of mandatory bidding documents to which borrowers had to adhere. The *Pink Book*<sup>65</sup> represents a formalisation of the amendments to the *Red Book* that had been developed by the MDB<sup>66</sup> for use in aid-funded projects. The purpose was to 'simplify the use of the FIDIC Conditions of Contract not only for the MDBs and their borrowers but also for others involved with project procurement including engineers, contractors, and contract specialists. It is intended for use on MDB financed projects only.'<sup>67</sup> The *2010 Pink Book* is the latest MDB harmonised version of the *1999 Red Book*, replacing earlier editions in 2005 and 2006. Essentially, the *Pink Book* should be regarded as just that – a version of the *Red Book*, though the amendments should not be underestimated, justifying, as they do, a separate publication. Many of the amendments are additional provisions aimed at achieving financial probity and transparency. For example, the Contractor is obliged to follow 'Inspections and Audit by the Bank'<sup>68</sup> of the Site, and of its accounts and records, and the Contractor is to be notified if the Bank suspends payments to the Borrower.<sup>69</sup> The intention of many of the *Pink Book* amendments to the *Red Book* is to avoid fraudulent and corrupt practices, and the Employer is given additional explicit powers of termination on such grounds.<sup>70</sup> Recognising that many aid-funded projects are in developing countries, there is quite extensive expansion of the provisions<sup>71</sup> on Staff and Labour, relating to such specific issues as Foreign Personnel, Supply of Food and Water, Measures against Insect and Pest Nuisances, Arms and Ammunition, Festivals and Religious Customs and Forced and Child Labour. There are modifications to the provisions for Claims, Disputes and Arbitration<sup>72</sup> with an option for the parties to choose institutional arbitral rules or UNICITRAL instead of ICC where the Contract is with a foreign contractor<sup>73</sup> and a default position in favour of the Singapore International Arbitration Centre for contracts financed by the Asian Development Bank.

### The DBO Gold Book

The *Gold Book*<sup>74</sup> is FIDIC's first attempt at a design-build-operate (DBO) contract intended to be used in the type of project funded by project-financing, for example under a PFI<sup>75</sup> scheme. It is treated by some commentators as one of FIDIC's principal contracts, although it was published in 2008 and so does not form part of the original Rainbow Suite. In terms of extent of usage it cannot, or cannot yet, be regarded as the equivalent of the Red, Yellow or Silver Books, nor even of the MDB. This is not only a function of the fact that it is relatively younger than those contracts. FIDIC's choice of DBO model is not suitable for all types of DBO project.<sup>76</sup> 'The document, as written, is not suitable for contracts which are not based on the traditional Design-Build-Operate sequence, or where the Operation Period differs significantly from the 20 years

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<sup>65</sup> Conditions of Contract for Construction for Building and Engineering Works designed by the Employer, Multilateral Development Bank Harmonised Edition 2010.

<sup>66</sup> The MDBs, known as the Participating Banks, operating under the auspices of the World Bank, are listed in the Introduction to the Pink Book and include the African Development Bank, the Asian Development Bank and the European Bank for Reconstruction and Development.

<sup>67</sup> Jeremy Glover and Simon Hughes QC (op. cit.), p. xxi. The Introduction by Christopher Thomas QC contains a useful account of the development of the Pink Book.

<sup>68</sup> Sub-Clause 1.15.

<sup>69</sup> Sub-Clause 2.4.

<sup>70</sup> Sub-Clause 15.6.

<sup>71</sup> In Clause 6.

<sup>72</sup> In Clause 20.

<sup>73</sup> Sub-Clause 20.6 (a) (i).

<sup>74</sup> Conditions of Contract for Design, Build and Operate Projects 2008.

<sup>75</sup> Private Finance Initiative.

<sup>76</sup> Some insight into the reasoning is given in the Foreword and Notes of the DBO Contracts Guide pp. 2-3.



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adopted.<sup>77</sup> However, the greatest restriction in terms of breadth of appeal was FIDIC's decision to adopt what it calls the 'green-field Design-Build-Operate scenario, with a 20-year operation period' where there is 'a single contract awarded to a single contracting entity.'<sup>78</sup> The *Gold Book* can therefore only be used in projects where the design-build work and the operation and maintenance work are to be carried out by the same contractor.

In simple terms, the *Gold Book* resembles a design/build contract, which is heavily based on the *1999 Yellow Book*, with an agreement attached for operation and maintenance that assumes a 20-year Operation Service Period.<sup>79</sup> Obviously, the latter necessitates the inclusion of a number of concepts and technical terms not found in the *Yellow Book*, such as Asset Replacement Fund<sup>80</sup>, Auditing Body<sup>81</sup>, Commissioning Certificate and Commissioning Period<sup>82</sup>, Operating Licence, Operation Management Requirement, Operation and Maintenance Plan, Operation Service, and Operation Service Period.<sup>83</sup> Because, self-evidently, the *Gold Book* was not included in the FIDIC Contracts Guide published in 2000, FIDIC subsequently issued a separate equivalent.<sup>84</sup> The commentary reveals that FIDIC was largely able to keep to the established 20-clause structure of the Rainbow Suite and that where possible many provisions are similar, especially to the *1999 Yellow Book*. The differences are essentially of two kinds: first, those additions which are a product of the Operation Service Phase, following on from the Design-Build Phase; and second, those changes which FIDIC introduced as improvements. Thus in addition to the Final Payment Certificate Design-Build<sup>85</sup> and the Final Statement Design-Build,<sup>86</sup> there is a Final Payment Certificate Operation Service<sup>87</sup> and a Final Statement Operation Service.<sup>88</sup>

In some respects, the *Gold Book* for a time acquired greater importance than could be explained solely by reference to its use on DBO projects; it was seen as an indicator as to the likely future direction of reform of the Rainbow Suite contracts. In the result, this has only partly been confirmed by the 2017 second editions. The emphasis on dispute avoidance in the new contracts was certainly foreshadowed by the *Gold Book*, though the *Gold Book* approach to time bars was only followed to a limited extent in the 2017 forms, and the risk allocation regime not at all.

### The Dredging and Reclamation Works Contract: the Blue Green Book

The FIDIC Dredging and Reclamation Works Contract<sup>89</sup> is sometimes known as the *Blue Book* or *Blue-Green Book*, though neither name has achieved the wide currency of the Rainbow Suite contracts. It is often excluded altogether from consideration by commentators on the FIDIC forms of contract. This is an unfortunate omission. Prepared in conjunction with the International Association of Dredging Companies, the Dredging and Reclamation Works Contract has been extensively used for coastal and marine works of all kinds, including ports and harbours. It is well known in the Middle East and benefits from an absence of competitors in a highly specialised sector. It bears some resemblance to the Short Form of Contract (see below) in being a straightforward, simplified contract, which can be executed on an Employer-design or design-build basis. This is a matter of agreement; the Contractor agrees to 'carry out design to the extent specified, as stated in the Contract Data.'<sup>90</sup> In the Notes for Guidance<sup>91</sup> it is explained that '[w]here the Employer procures any part of the design, the responsibility for design will be shared as this Contract makes the Contractor responsible only for design prepared by him. The extent of the Contractor's design obligation should therefore be clearly stated if disputes are to be avoided.'

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<sup>77</sup> Foreword to Gold Book, p. 2.

<sup>78</sup> Foreword to Gold Book, p. 2.

<sup>79</sup> Gold Book, Particular Conditions Part B – Special Provisions, p. 7.

<sup>80</sup> Sub-Clause 1.1.2.

<sup>81</sup> Sub-Clause 1.1.4.

<sup>82</sup> Sub-Clauses 1.1.8 and 1.1.9.

<sup>83</sup> Sub-Clauses 1.1.54 to 1.1.58.

<sup>84</sup> The FIDIC DBO Contract Guide 2011.

<sup>85</sup> Sub-Clause 1.1.39.

<sup>86</sup> Sub-Clause 1.1.41.

<sup>87</sup> Sub-Clause 1.1.40.

<sup>88</sup> Sub-Clause 1.1.42.

<sup>89</sup> Form of Contract for Dredging and Reclamation Works, 2nd edition 2016.

<sup>90</sup> Sub-Clause 5.1.

<sup>91</sup> Page G.

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Where the *Blue-Green Book* is used for Dredging Works, it is worth noting that the Contractor has no obligation to rectify defects after Taking-Over.<sup>92</sup>

In other respects, the Dredging and Reclamation Works Contract exhibits many of the characteristics of the FIDIC *Green Book* (see below), and adopts the same 15-clause structure. Contract administration under the Dredging and Reclamation Works Contract is done by the Engineer. Price can be on a re-measurement, lump sum or cost-plus basis; the Contract Data contains a range of pricing options.<sup>93</sup> Dispute resolution in the first instance is by a DAB, with final resolution by arbitration. The FIDIC Dredging and Reclamation Works Contract is an example of a sector-specific standard form, which, though not generally well known, has a disproportionately large significance within that specialist industry.

### The Short Form of Contract: the Green Book

Although it is not one of FIDIC's principal contracts, the *Green Book* would have some claim to be regarded as part of the Rainbow Suite, since it was issued in 1999. FIDIC states that it is 'for engineering and building works of relatively small capital value', or for contracts of greater value requiring 'fairly simple or repetitive work or works of short duration'.<sup>94</sup> It has been suggested that 'USD 500,000 and 6 months should be regarded as reasonable limits on the capital value and duration respectively'.<sup>95</sup> Like the Dredging and Reclamation Works Contract (see above), the *Green Book* has a simplified 15-clause format. Also like the Dredging and Reclamation Works Contract, the Parties can agree the extent, if any, to which the Employer provides input into the design.<sup>96</sup> The Contractor has a fitness-for-purpose duty for its design.<sup>97</sup> As with the Dredging and Reclamation Works Contract, pricing is a matter of choice for the Parties<sup>98</sup> between a range of options extending from varieties of lump sum to re-measurement and even a cost reimbursable option. The *Green Book* differs from the Dredging and Reclamation Works Contract in some key respects. First, there is no express provision for the appointment of an Engineer to undertake contract administration. FIDIC invites reconsideration of this position; 'although there is no reference to an impartial Engineer, the Employer may appoint an Engineer to act impartially, should he wish to do so'.<sup>99</sup> Second, the dispute resolution rules are more basic than for other FIDIC Contracts. There is no DAB, but an adjudicator, and no time for amicable dispute resolution. Reflecting the anticipated smaller scale of disputes, there is no reference to ICC arbitration.<sup>100</sup> Instead, the parties agree the applicable rules and other arrangements in the Appendix. The *Green Book* guidance<sup>101</sup> advises that 'The UNCITRAL Rules are recommended', though ICC arbitration is raised as an option if institutional administration is required. The *Green Book* is, in effect, an international version of domestic minor works contracts and it reflects this perspective throughout.

### The Subcontract

The FIDIC Subcontract has been expressly prepared for use with the *1999 Red Book*.<sup>102</sup> It can also be used with the *Pink Book* 'but only if the necessary amendments are made to reflect the significant differences'<sup>103</sup> between the Pink and Red Books. Described as a 'First Edition,' the Subcontract replaced the 1994 Subcontract, which had been prepared for use with the *FIDIC Red Book* fourth edition. The General Conditions are prepared to operate 'back to back' with the *1999 Red Book* in terms of rights and obligations. In the case of the Force Majeure provisions,<sup>104</sup> this is literally done with the words 'The provisions of Main Contract Clause 19 (Force Majeure) shall apply to the Subcontract.' The form is also noticeable for a series of

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<sup>92</sup> Sub-Clause 9.2.

<sup>93</sup> Clause 11 and page M.

<sup>94</sup> See Foreword to Short Form of Contract 1999.

<sup>95</sup> Axel-Volkmar Jaeger and Götz-Sebastian Hök (op. cit.), p. 125, based on FIDIC guidance

<sup>96</sup> Appendix and Clause 5.

<sup>97</sup> Sub-Clause 5.2.

<sup>98</sup> Appendix and Clause 11.

<sup>99</sup> In the Foreword.

<sup>100</sup> Sub-Clause 15.3.

<sup>101</sup> Notes for Guidance p. 29.

<sup>102</sup> See Foreword to Conditions of Subcontract for Construction for Building and Engineering Works designed by the Employer 2011.

<sup>103</sup> See Foreword to Conditions of Subcontract for Construction for Building and Engineering Works designed by the Employer 2011.

<sup>104</sup> Clause 19.

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flow charts. These represent typical sequences of the principal events, of payment events<sup>105</sup> and of Subcontractor claims and disputes under alternative versions of the dispute resolution provisions.<sup>106</sup> The Subcontract carries a fitness for purpose obligation, to the extent that the Subcontractor is responsible for design.<sup>107</sup> Payment is by measurement in accordance with the Main Contract (i.e., *Red Book*) provisions.<sup>108</sup> Obviously, there is no Engineer appointed and contract administration is in the hands of the Contractor. Subcontract disputes are resolved by reference to a Subcontract DAB, followed by time for amicable settlement in the event of reference to arbitration, which provides for ICC Rules with one arbitrator rather than three as the default position.<sup>109</sup>

## Consultancy agreements

The remaining current FIDIC contracts are consultancy agreements. They differ from the Rainbow Suite Contracts and the other standard forms (as above) in that they are not construction contracts and do not involve the contractor. Most significant of these by far is the *White Book*.<sup>110</sup> First published in 1990, the *White Book* is probably the most significant agreement for professional services in construction globally. The contract is between the 'purchaser' of the services: 'Client' rather than 'Employer,' and the 'supplier' of the services: 'Consultant' rather than 'Contractor.'

FIDIC's intention was to produce an agreement for 'general use for the purposes of pre-investment and feasibility studies, detail design and administration of construction and project management, both for Employer-led design teams and for Contractor-led design teams on design and build commissions.'<sup>111</sup>

A feature of the 2006 (and previous editions) of the *White Book* was the very limited provision concerning the rights and obligations of the Parties. The basic Consultant's duty of care was stated to be 'no other responsibility than to exercise reasonable skill, care and diligence in the performance of his obligations under the Agreement'.<sup>112</sup> This was consistent with the English law concept of the basic duty of the supplier of a service.<sup>113</sup> An attempt has been made in the 2017 fifth edition to make this more flexible, by providing<sup>114</sup> that the 'Consultant shall perform the Services with a view to satisfying any function and purpose that may be described in Appendix I [Scope of Services]'. This is still said to be only to the extent achievable using reasonable care and skill, so would constitute an issue in the provision of design services, for example, for a design-and-build contractor required to give a fitness for purpose obligation to the employer for design and so would often not be back-to-back. However, there has been a significant strengthening of the reasonable skill, care and diligence standard itself to 'that to be expected from a consultant experienced in the provision of such services for projects of similar size, nature and complexity'.

The actual substance of the scope of services is very limited. Some more guidance notes have been inserted by the 2017 fifth edition; but the Appendices are still largely blank pages, to be filled in by the parties. Consequently, what are in effect further Particular Conditions will usually be much greater in volume than the General Conditions. The fifth edition has also added new provisions relating to Client-instructed Variations to the Services<sup>115</sup>. A mechanism exists for instructing Variations but 'Any such Variation shall not substantially change the extent or nature of the Services.'<sup>116</sup>

The dispute resolution provisions of the *White Book* have always differed sharply from those found in the construction contracts. Under the 2017 fifth edition, disputes are first subject to an amicable dispute resolution

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<sup>105</sup> Under Clause 14.

<sup>106</sup> Clause 20 and Particular Conditions.

<sup>107</sup> Sub-Clause 4.1.

<sup>108</sup> Sub-Clause 12.1.

<sup>109</sup> Sub-Clauses 20.6 and 20.7.

<sup>110</sup> The Client/Consultant Model Service Agreement 4th edition 2006 has just been replaced by the 5th edition 2017.

<sup>111</sup> Foreword to White Book 5th edition 2017.

<sup>112</sup> Sub-Clause 3.3.1.

<sup>113</sup> Supply of Goods and Services Act 1982 s.13..

<sup>114</sup> Sub-Clause 3.3.2.

<sup>115</sup> Clause 5.

<sup>116</sup> Sub-Clause 5.1.1.

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stage,<sup>117</sup> which is now stated to be mandatory, followed by adjudication<sup>118</sup> with a further provision for amicable settlement<sup>119</sup> before reference to arbitration<sup>120</sup>, either subject to agreement by the Parties or to ICC Rules. In addition to the fifth edition of the *White Book*, in 2017, FIDIC published second editions of its Model Joint Venture (Consortium) Agreement and Sub-Consultancy Agreement, both developed for use with the White Book. The Model Representative Agreement (*Dark Blue Book*) 2004 has not yet been updated.

## Former FIDIC Contracts Still in Use

It is a curious fact that FIDIC has continued to market the *Orange Book*<sup>121</sup> after its replacement by the 1999 *Silver Book*. In some respects, the *Orange Book* was a forerunner of the Rainbow Suite generally, as well as the *Silver Book* specifically, with its 20-clause structure, time-bars for Contractor claims<sup>122</sup> and role of the DAB<sup>123</sup>, though the arbitration provision does not include the ICC. Its continued use, now inevitably diminishing, is due partly no doubt to perceptions of the *Orange Book* as less aggressive than the still-controversial *Silver Book*.

More generally, its survival is indicative of the inherent conservatism of the construction industry. This too explains the persevering use of the fourth edition of the *FIDIC Red Book*, which was often used as a basis for standard forms in the Middle East, though it is now being replaced by its 1999 successor.

## Continuing Revision of the FIDIC Contracts

2017 saw a major effort by FIDIC in publishing first the fifth edition of the *White Book* Client/Consultant Model Services Agreement (plus the second revisions of the Model Joint Venture (Consortium) Agreement and the Sub-Consultancy Agreement), and then pre-eminently the second editions of the Red, Yellow and Silver Books.

Consequent upon these publications, there will be a need for a new FIDIC Guide, to replace the 2000 Guide to the 1999 Red, Yellow and Silver Books. Presumably, in addition, a new Subcontract and new edition of the MDB Book, or equivalent standard amendments to the *Red Book*, will also be needed. At the time of writing, these had not appeared, though they can be expected to do so either in the course of publication or soon after.

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<sup>117</sup> Sub-Clause 10.1.1.

<sup>118</sup> Sub-Clause 10.2.

<sup>119</sup> Sub-Clause 10.3.

<sup>120</sup> Sub-Clause 10.4

<sup>121</sup> See n. 24, above.

<sup>122</sup> Sub-Clause 20.1.

<sup>123</sup> Sub-Clauses 20.3 and 20.4, 20.7 and 20.8.