Dr Zeljko Popovic

Claims for Extension of Time in FIDIC Construction Contracts

A Practical Approach under UAE Law

Higher Colleges of Technology
www.hct.ac.ae

Abu Dhabi Men's College
admc.hct.ac.ae

Department of Civil Engineering

Editors:

Dr Cherven Singh
Program Chair – Department of Civil Engineering

Dr Milan Krasulja
Faculty - Department of Civil Engineering

Claims for Extension of Time in FIDIC Construction Contracts -
A Practical Approach under UAE Law

Zeljko Popovic
PhD (Civil Engineering), LLM (Construction Law), MRICS, MCIArb

Abu Dhabi, UAE

2016

Foreword

This publication is a result of research and practical work on construction sites. It deals with the management of time and time-related costs on projects that are based on contract forms published by the Fédération Internationale des Ingénieurs Conseils (FIDIC). Being written by a practitioner who participates in HCT's civil engineering programmes, it should reflect both the practical and educational aspects of the topic, and may appeal to students and practitioners who are involved in analysing, reviewing or resolving project delays.

Apart from benchmarking the current UAE contract practice against professional standards, legal issues related to extensions of time (EOT) are reviewed in more detail, such as: interpretation of contract terms, role of the Engineer when assessing claims, delay notices and warnings, maintenance of site records, concurrent delays, ownership of floats in the programme, sub-contractor EOT claims, admissible costs of delay, delay damages and penalties, acceleration of the works, mitigation of delays and global EOT claims.

It appears that operation of standard FIDIC provisions under UAE civil law system may have different effects when compared to their operation under English law, where FIDIC was originally rooted. In addition to discussions and examples, some practical recommendations are offered to students and practitioners in order to overcome problems.

The author is thankful to his company, Aabar Properties in Abu Dhabi, for allowing the collaboration with Higher Colleges of Technology, and to his colleague Raviraj Bhedase, for sharing local experience and opinions. Author’s gratitude is also expressed towards the staff of the School of Law at Robert Gordon University in Aberdeen, who approved and mentored the research, and to the Department of Civil Engineering at Abu Dhabi Men's College, who supported and reviewed the publication, and who eventually made it available to students and practitioners. In particular, I would like to thank the editors, Dr Cherven and Dr Milan, for their personal involvement.

In Abu Dhabi, June 2016.

Zeljko Popovic

Contents

Abbreviations

ADR	Alternative Dispute Resolution
BIM	Building Information Modelling
BOQ	Bill of Quantities
CIOB	Chartered Institute of Building
DAB	Dispute Adjudication Board
EOT	Extension of Time
FIDIC	Fédération Internationale Des Ingénieurs Conseils (The International Federation of Consulting Engineers) (http://fidic.org/)
GCC	Gulf Cooperation Council (Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, UAE)
ICC	International Chamber of Commerce
JCT	Joint Contracts Tribunal
LDs	Liquidated Damages
NEC	New Engineering Contract
PMI	Project Management Institute
RB	FIDIC Conditions of Contract for Construction for Building and Engineering Works Designed by the Employer, 1st Edition 1999 (The Red Book)
RIBA	Royal Institution of British Architects
RICS	Royal Institution of Chartered Surveyors
SCL	Society of Construction Law
UAE	United Arab Emirates
UK	United Kingdom
USA	United States of America
YB	FIDIC Conditions of Contract for Plant and Design-Build, 1st Edition 1999 (The Yellow Book)

List of Cases

Abu Dhabi Court of Cassation Case (2010), Decision on Using Electronic Communications as Evidence

Adyard Abu Dhabi v SD Marine Services [2011] EWHC 848

Alfred McAlpine Capital Projects v Tilebox Ltd [2005] BLR 271

Allen v Pink [1838] 4 M & W 140

Arabtec Construction LLC v Ultra Fuji International LLC (2007) DIFC Case CFI 004/2007, Dubai

Ascon Contracting Ltd v Alfred McAlpine Construction Isle of Man Ltd [1999] 66 Con LR 119

Attorney General for the Falklands Islands v *Gordon Forbes Construction (Falklands) Limited* [2003] 6 BLR 280

Babcock Energy Ltd v Lodge Sturtevant Ltd (Formerly Peabody Sturtevant Ltd) [1994] 41 ConLR 45

Balfour Beatty Building Ltd v Chestermount Properties Ltd [1993] 62 BLR

Balfour Beatty Construction Ltd v The Mayor And Burgesses of the London Borough of Lambeth [2002] 1 BLR 288

Beaufort Developments (NI) Ltd v Gilbert-Ash NI Ltd and Others [1988] UKHL 19

Bickerton v North West Metropolitan Regional Hospital Board [1970] 1 WLR 607

Bramhall and Ogden Ltd v Sheffield City Council [1985] 29 BLR 73

Bremer Handelgesellschaft mbH v *Vanden Avenne Izegem nv* [1978] 2 Lloyd's Rep. 113

British Sugar plc v NEI Power Plant Projects Ltd [1997] 87 BLR 42

British Westinghouse Electrical Manufacturing Co Ltd v Underground Electric Railways [1912] AC 673

Bush v Whitehaven [1888] 52 JP 392

City Inn Ltd v *Shepherd's Construction* [2007] CSIH 68

Costain Ltd v Charles Haswell & Partners Ltd [2009] EWHC 3140 (TCC)

Croudace Construction Ltd v Cawoods Concrete Products Ltd [1978] 2 Lloyd's Rep 55

Dimond v Lovell [1999] EWCA Civ 1311

Dood v Churton [1897] 1QB 562

DSND Subsea Ltd v Petroleum Geo-Services ASA and PGS Offshore Technology AS [2000] WL 1741490

Dubai Court of Cassation Case 1/2006

Dubai Court of Cassation Case 125/2007

Dubai Court of Cassation Case 138/1994

Dubai Court of Cassation Case 176/1996

Dubai Court of Cassation Case 184/2008

Dubai Court of Cassation Case 213/2008 Commercial Appeal (2009)

Dubai Court of Cassation Case 266/2008 Commercial Appeal (2009)

Dubai Court of Cassation Case 280/2008

Dubai Court of Cassation Case 294/2008

Dubai Court of Cassation Case 3/2000

Dubai Court of Cassation Case 302/21/2001

Dubai Court of Cassation Case 324/2001

Dunlop Pneumatic Tyre Co Ltd v New Garage and Motor Company Limited [1915] AC 79

F B McKee & Company Ltd v North West Regional College [2010] NIQB 59

F G Minter Ltd v Welsh Health Technical Services Organisation [1980] 13 BLR 1, CA

Gaymark Investments Pty Ltd v *Walter Construction Group Ltd* [1999] 18 BCL 449

Hadley v Baxendale [1854] 156 ER 145

Henry Boot Construction (UK) Ltd v Malmaison Hotel (Manchester) Ltd [1999] 70 Con LR 32

Henry Boot Ltd v Alstom Combined Cycles Ltd [2005] EWCA Civ 814

H Fairweather and Co Ltd v London Borough of Wandsworth [1987] 39 BLR 106

Hutton v Warren [1836] 150 ER 517

ICC Case No. 3790 (1983)

ICC Case No. 7910 (1996)

ICC Case No. 10619 (2001)

ICC Case No. 10847 (2003)

ICC Case No. 11813 (2002)

ICC Case No. 11847 (2003)

ICC Case No. 12654 (2005)

ICC Case No. 15282 (2010)

Inserco Ltd v Honeywell Control Systems Ltd [1996] 21 BLISS 3

Investors Compensation Scheme Ltd v West Bromwich Building Society [1998] 1 All ER 98

James Longley v South West Thames [1984] 25 BLR 56

J F Finnegan v Sheffield City Council [1988] 43 BLR 124

John Doyle Construction Ltd v Laing Management (Scotland) Ltd [2004] Scots CS 141, BLR 295

John F Hunt Demolition v ASME Engineering [2007] EWHC 1507 (TCC)

John L Haley Ltd v Dumfries & Galloway Regional Council [1988] 39 GWD 1599

John Mowlem & Co plc v Eagle Star Insurance Co Ltd [1992] 62 BLR 126

Kitson Sheet Metal Ltd v Matthew Hall Mechanical & Electrical Engineers Ltd [1989] BLR 82

London Borough of Merton v Leach (Stanley Hugh) Ltd 1985 32 BLR 51

London Underground Ltd v Citylink Telecommunications [2007] EWHC 1749 (TCC)

Martin Grant & Co Ltd v Sir Lindsay Parkinson & Co Ltd [1984] 3 ConLR 116

McCain Foods GB Ltd v Ec-Tech (Europe) Ltd [2011] EWHC 66

Midland Land Reclamation Ltd v Warren Energy Ltd [1997] EWHC Technology 375

Motherwell Bridge Construction Ltd v Micafil Vakuumtechnik [2002] TCC 81 ConLR 44

Multiplex Construction v *Honeywell Control Systems* [2007] EWHC 447 (TCC)

National Insurance Property Development Co Ltd v NH International (Caribbean) Ltd, High Court of Trinidad and Tobago, 21 October 2009 (Claim No CV2008-04881)

Natken & Co v George A Fuller & Co 347 F. Supp. 17 (W.D. Mo. 1972)

Ogilvie Builders Ltd v Glasgow City District Council [1994] 68 BLR 122

Pacific Associates Inc and Another v Baxter and Other [1988] 44 BLR 33

Peak Construction (Liverpool) Ltd v McKinney Foundations Ltd [1970] 1 BLR 111

Percy Bilton v Greater London Council [1982] 1 WLR 794

Pigott Foundations v Shepherd Construction [1994] 67 BLR 48

P&O Developments Ltd v The Guy's and St Thomas' NHS Trust [1999] BLR 3

Reardon Smith Line v Hansen-Tangen [1976] 1 WLR 989

Rees & Kirby Ltd v Swansea City Council [1985] 30 BLR 1

Robertson v Jackson [1845] 2 CB 412

Royal Brompton Hospital National Health Trust v Hammond etc [2002] BLR 255, [2002] All ER 801

Steria Ltd v Sigma Wireless Communications Ltd [2008] 118 Con LR 177

Tate & Lyle Food and Distribution Ltd v Greater London Council [1981] 3 All ER 716

Temloc Ltd v Errill Properties Ltd [1987] 39 BLR 34

Terrell v Mabie Todd & Co Ltd [1952] 69 RPC 234

Volkswagen Financial Services (UK) Ltd v George Ramage [2007] CTLC 119

Walter Lilly and Company v MacKay [2012] BLR 503

Whittal Builders Company Ltd v Chester-Le-Street District Council [1985] 11 CLR 40

Wraight Ltd v PH & T (Holdings) Ltd [1968] 8 BLR 22

Yam Seng Pte Ltd (a company registered in Singapore) v International Trade Corporation Ltd [2013] EWHC 111 (QB)

List of Statutes and Contract Forms

Abu Dhabi Conditions of Contract, Decree of the Head of Executive Council, Decision No 1 of 2007 (Based on modified FIDIC Red and Yellow Books under special FIDIC license issued to Abu Dhabi Municipality)

Dubai International Financial Centre (DIFC) Law of Contract (DIFC Law No. 6 of 2004)

Dubai International Financial Centre (DIFC) Law of Damages and Remedies (DIFC Law No. 7 of 2005)

FIDIC Conditions of Contract for Construction for Building and Engineering Works Designed by the Employer, 1st Edition 1999 (The Red Book)

FIDIC Conditions of Contract for EPC/Turnkey Projects, 1st Edition 1999 (The Silver Book)

FIDIC Conditions of Contract for Plant and Design-Build, 1st Edition 1999 (The Yellow Book)

FIDIC Conditions of Subcontract for Construction for Building and Engineering Works Designed by the Employer, 1st Edition 2011

Housing Grants, Construction and Regeneration Act 1996

Local Democracy, Economic Development and Construction Act 2009

UAE Commercial Transactions Law No. 18 of 1993 (‘Commercial Transactions Law’ or 'Commercial Code')

UAE Federal Law No. 5 of 1985 amended by Federal Law No. 1 of 1987 (‘The Law of Civil Transactions’ or ‘Civil Code’)

UAE Federal Law of Evidence No. 10 of 1992 ('UAE Evidence Act'), amended by Law No. 36 of 2006 ('Electronic Transactions')

1 Introduction

1.1 Background

Risk of delay in construction projects

Delay in construction projects is not a new topic.

The extensive **CIOB Report (2008)**[1] addressed the inefficiency of time management in the 21st Century, based on data collected from around 2,000 projects. CIOB criticized the improper use of network programming, lack of resource/cost allocation in construction programmes and poor contract administration. In 33% of building and 75% of civil engineering projects, contractors were responsible for delays[2] and only 20% of them were familiar with a delay being declared even if the contract required it! Reasons for failing to notify delays included 'possible catch up' (41%), blame of others (10%), good relationships (37%); only 12% of reasons were contractual.[3]

In the Middle East, **EC Harris (2013)**[4] reported that top two causes of construction disputes were: improper contract administration and failure to make interim extension of time (EOT) awards. Furthermore, dispute resolution times in the Middle East seem to be the longest in the world, 14.6 months in average![5]

---

[1] CIOB, *Managing the Risk of Delayed Completion in the 21st Century*, Research published in 2009, available at <http://www.ciob.org/sites/default/files/CIOB%20research%20-%20Managing%20the%20Risk%20of%20Delayed%20Completion%20in%20the%2021st%20century.pdf> accessed 25-07-2014

[2] Ibid, Executive summary, page 7

[3] Ibid, Administration of delay, page 43

[4] EC Harris, *Global Construction Disputes: A Longer Resolution*, Report published in 2013, available at <http://www.echarris.com/pdf/EC%20Harris%20Construction%20Disputes%202013Final.pdf> accessed 04-08-2014

[5] Ibid, Chapter: Middle East Region, page 4

Another **UAE-specific survey (2012)**[6] found that 90% of 63 surveyed projects were delayed in average by 8.3% of the planned duration. Reasons for delay correlate with poor scope management and lack of proper project planning and control systems.

CIOB recommended further standardization, training and accreditation measures, which are yet to be finalized. Other professional organizations in the UK, such as SCL[7], RIBA[8] and RICS,[9] have taken similar initiatives and published their own professional guides. However, practitioners in the Middle East are in need of recommendations that are locally implemented or tested, which prompted this publication.

Common and civil law approaches to time management

In English common law, unless expressly stated, it is unusual for time to be of the essence, which would entitle the employer to rescind (cancel) the building contract and claim damages[10]. Usually, contractor's failure to complete on time is regarded as breach of contract, which entitles the employer to apply liquidated damages (LDs).

At common law, contractor's obligation to pay LDs is removed if the employer delays the contractor (e.g. by instructing additional works).[11] The employer has a duty not to prevent the contractor, see ***London Borough v Leach (Stanley Hugh)* (1985)**,[12] and cannot benefit from his own wrong (the 'prevention principle'). If the employer delays, time becomes 'at large', and the contractor is to complete within 'reasonable' time.

Even if the employer's contribution to overall delay is small, the LDs provision fails altogether,[13] see ***Dood v Churton (1897)***.[14] In ***Peak Construction v McKinney***

---

[6] Arun Bajracharya and Mohammad Halloum, *Cost and Time Overrun Revisited: A Study on the Infrastructure Construction Projects in Abu Dhabi - UAE*, Third International Conference on Construction in Developing Countries (ICCIDC–III) "Advancing Civil, Architectural and Construction Engineering & Management", July 4-6, 2012, Bangkok, Thailand

[7] Society of Construction Law (SCL), *Delay and Disruption Protocol,* October 2002, reprinted October 2004, available at <http://www.scl.org.uk/resources> accessed 26-07-2014

[8] Royal Institution of British Architects (RIBA), *Good Practice Guide: Extensions of Time* (RIBA Publishing, 2008)

[9] Royal Institution of Chartered Surveyors (RICS), *Extensions of Time* (1st Edition, RICS Professional Guidance, 2014)

[10] MacRoberts Solicitors, *MacRoberts on Scottish Building Contracts* (2nd edition, Blackwell Publishing, UK, 2008), para 6.3 - Time of the essence, p 102

[11] John Murdoch, Will Hughes, *Construction Contracts – Law and Management* (4th edition, Taylor & Francis, UK, 2008), para 14.5 - Adjustments of time, p 197

[12] *London Borough of Merton v Leach (Stanley Hugh) Ltd* 1985 32 BLR 51

[13] John Murdoch, Will Hughes, *Construction Contracts – Law and Management* (4th edition, Taylor & Francis, UK, 2008), para 14.5 - Adjustments of time, p 197

Foundations (1971),[15] McKinney's piling works were delayed due to defects, but also due to late employer's instructions. Since the employer's delay event was not contemplated by the EOT mechanism, time became 'at large' rendering the LDs clause inoperative. The employer could only recover damages at common law for delay beyond a 'reasonable period'.

Both contractors and employers are, therefore, interested in the EOT mechanism; contractors to avoid LDs and employers to retain the entitlement to them.

However, EOT provisions in international contract forms, such as FIDIC,[16] usually have their roots in English law and their interpretation in civil law systems may be different.

For example, English law establishes LDs as a genuine pre-estimate of damages, not as a penalty, which is unenforceable. In contrast, the German Civil Code allows for a penalty against non-fulfilled contractual obligations even if no damage occurred, and further damages are not excluded;[17] penalties may be reduced by German courts.[18]

Similarly, English law favours express contract provisions over 'good faith'.[19] On the other hand, the French Civil Code requires that contractual obligations *'must be performed in good faith'*.[20] The German Civil Code also states that performance should be effected *'in the manner of good faith, having regard to custom'*.[21] The UAE civil law stipulates similar requirements, which are discussed later in more detail.

This research will focus on the application of FIDIC EOT provisions under UAE civil law. FIDIC provisions are reviewed in Chapter 2, UAE contract practice is assessed in Chapter 3, while UAE and English law approaches are analysed and compared in Chapter 4.

---

[14] *Dood v Churton* [1897] 1QB 562
[15] *Peak Construction (Liverpool) Ltd v McKinney Foundations Ltd* [1970] 1 BLR 111
[16] FIDIC - Fédération Internationale Des Ingénieurs-Conseils (The International Federation of Consulting Engineers), <http://fidic.org/> accessed 01-03-2015
[17] Axel-Volkmar Jaeger, Götz-Sebastian Hök, *FIDIC – A Guide for Practitioners* (Springer-Verlag, Germany, 2010), para 1.4.6.7 - Time for Completion, page 43
[18] German Civil Code (Bűrgerliches Gesetzbuch), s. 343
[19] Roger Knowles, *200 Contractual Problems and their Solutions* (3rd edition, Willey-Blackwell, UK, 2012), p 122
[20] French Civil Code (Code Civil), art. 1134(3)
[21] German Civil Code (Bűrgerliches Gesetzbuch), s. 242

Legal system and construction contracts in UAE

In the UAE and other GCC countries,[22] except in Saudi Arabia, civil law is derived from the **Egyptian Civil Code,**[23] which reconciled the principles of Sharia and French laws.[24] Sharia principles are embedded into Civil Codes and apply in the absence of rules of law and custom:[252627]

- good faith is implied (e.g. time bar provisions for delay notices may not work where the Employer is at fault);
- unjust enrichment *(Riba)* is prohibited (e.g. the recovery of financing charges due to delays may be restricted); and
- unfair benefit from uncertainty *(Gharar)* is prohibited (e.g. imposing on a Contractor an unquantifiable risk for site physical conditions may be unenforceable).[28]

UAE Civil Law is contained in the **UAE Civil Code**.[29] Of particular interest are Articles 1 (role of Sharia), 106 (unlawful exercise of rights), 246 (good faith), 249 (exceptional circumstances), 265-266 (interpretation of contracts), 283-296 (limitation of liability), 318-319 (unjust enrichment), 390 (pre-agreed limits), 892-896 (contracts for works, Muqawala), etc.

The **UAE Commercial Code**[30] may also apply as parties to a construction claim are 'traders'; Article 6 defines contracting as 'commercial works' and Article 11 defines 'traders'.

---

[22] Gulf Cooperation Council (GCC), founded on 26 May 2081 by Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and UAE

[23] Egyptian Civil Code 1948 - Egypt Law No. 131 of 1948 Issuing the Civil Code

[24] Adam Balchin, The Middle East, construction and the law, Al Tamimi & Co, February 2013, <http://www.tamimi.com/en/magazine/law-update/section-5/february-4/the-middle-east-construction-and-the-law-1.html> accessed 27-04-2014

[25] Saleh Majid, *Application Of Islamic Law In The Middle East* (International Construction Law Review, Volume 20 January 2003), <http://www.mondaq.com/x/52976/international+trade+investment/Application+Of+Islamic+Law+In+The+Middle+East> accessed 23-04-2014

[26] UAE Civil Code, Article 1

[27] Raid Abu-Manneh, *Contracting in the Middle East* (Construction & Engineering Legal Update, Issue 57 December 2008, published by Mayer Brown), <http://www.mayerbrown.com/publications/Construction-amp-Engineering-Legal-Update-12-18-2008/> accessed 25-04-2014

[28] Howard L Stovall, *Arbitration and the Arab Middle East: some thoughts from a commercial lawyer,* 2009, <http://www.stovall-law.com/images/Arbitration_in_the_Arab_Middle_East.pdf> accessed 26-04-2014

[29] UAE Federal Law No. 5 of 1985 amended by Federal Law No. 1 of 1987 (The Law of Civil Transactions or 'Civil Code')

[30] UAE Commercial Transactions Law No. 18 of 1993 ('Commercial Transactions Law' or 'Commercial Code')

UAE construction contracts are usually based on the employer-modified **FIDIC Red[31] and Yellow Books[32]** as surveyed and confirmed in **AECOM's Middle East Handbook (2013),**[33] **Reuter's Construction Guide (2014)[34]** and **International Legal Guides (2014).**[35] Abu Dhabi Municipality uses FIDIC forms modified under special FIDIC license (2007).[36] They contain subtle changes which often seek to impose harsher obligations upon the contractor.[37] However, provisions that appear to have drastic consequences on EOT claims may, in fact, have a different effect due to the UAE Civil Code.

NEC3 contract forms have been rarely used, and have not been reinvigorated in Abu Dhabi since the failed test case in 2007 on the Al Raha Beach development.[38]

1.2 What to expect

The reader should expect a thorough review of the provisions for EOT claims in FIDIC contract forms (time and cost), including references to FIDIC publications, practice guides and arbitration cases recorded by the ICC International Court of Arbitration.

Furthermore, the current contract practice for time management will be critically assessed based on author's own experience and available publications. Legal issues relevant to EOT under UAE and English laws will be analysed and compared in detail, with some useful illustrations and recommendations for practical work.

---

[31] FIDIC Conditions of Contract for Construction for Building and Engineering Works Designed by the Employer, 1st Edition 1999 (The Red Book)

[32] FIDIC Conditions of Contract for Plant and Design-Build, 1st Edition 1999 (The Yellow Book)

[33] AECOM, *Middle East Construction Handbook 2013* (Bahrein, Egypt, KSA, Kuwait, Lebanon, Oman, Qatar, UAE), p 94

[34] Michael Kerr, Dean Ryburn, Beau McLaren and Zehra Or Dentons, *Construction and projects in United Arab Emirates: Overview*, Thomson Reuters Multi-Jurisdictional Guide 2013/14 - Construction and projects law, available at <http://uk.practicallaw.com/1-519-3663?service=construction> accessed 29-07-2014

[35] International Comparative Legal Guides (ICGL), *United Arab Emirates – Construction & Engineering Law 2014,* by Adam Balchin and Euan Lloyd, Al Tamimi & Company, 2014, available at <http://www.iclg.co.uk/practice-areas/construction-and-engineering-law/construction-and-engineering-law-2014/united-arab-emirates> accessed 09-08-2014

[36] Abu Dhabi Conditions of Contract, Decree of the Head of Executive Council, Decision No 1 of 2007 (Based on modified FIDIC Red and Yellow Books under special FIDIC license granted to Abu Dhabi Municipality)

[37] Michelle Nelson, *FIDIC 1999 or something else in disguise?* (Construction Week, 30 June 2007), available online at <http://www.arabianbusiness.com/fidic-1999-something-else-in-disguise--58481.html> accessed on 28-07-2014

[38] Julio Cesar Bueno (Editor), The project and construction review (Law Business Research, 2011), Chapter 25 – United Arab Emirates by Leonora Riesenburg, Galadari & Associates, Dubai

2 Analysis of the provisions for EOT in FIDIC contract forms

FIDIC 1999 Red Book (RB) and Yellow Book (YB) are the most commonly used conditions of contract for international construction projects,[39] favoured by major development banks.[40] They include the General and Particular Conditions, and majority of the clauses are identical. The main differences are in the allocation of design responsibilities (RB: Employer; YB: Contractor) and measurement of works (RB: re-measurement with BOQ; YB: lump sum with payment schedules).

FIDIC EOT provisions are briefly discussed hereunder.

2.1 Relevant definitions and choice of law in the contract

Sub-Clause 1.1 (Definitions) defines the contractual meaning of some plain words and the law of contract.

In FIDIC language, *'day'* means a calendar day and *'year'* means 365 days (1.1.3.9); *'Cost'* is all expenditure reasonably incurred on/off the Site, including overheads, but excluding profit (1.1.4.3); *'Site'* means the places where the Permanent Works are executed and to which Plant/Materials are delivered (off-site places are not automatically covered) (1.1.6.7). *'Contractor's Equipment'* means construction machines (1.1.5.1), *'Plant'* is built-in (1.1.5.5). *'Unforeseeable'* means not reasonably foreseeable by an experienced contractor by the Tender submission date (1.1.6.8). *Laws* (1.1.6.5) cover not only national legislation listed in the Appendix to Tender, but also regulations and by-laws of any public authority, which can affect time and Cost.

The UAE Constitution permits each of the Emirates to retain its own judicial system, and this is observed by local courts.[4142] The courts apply Federal laws enacted by the Supreme Council (the highest authority, consisting of the Rulers of seven Emirates) as well as local

[39] Brian Barr and Leo Grutters (originally by Brian Totterdill), *FIDIC Users' Guide* (ICE Publishing, UK, 2014), chapter 1.2, p 4
[40] Jane Jenkins, *International Construction Arbitration Law* (2nd Edition, Kluwer Law International BV, The Netherlands, 2014), para 1.04[A], p 9
[41] see Dubai Court of Cassation Judgment 176/96 dated 8 March 1997
[42] see Dubai Court of Cassation Judgment 3/2000 dated 29 April 2000

laws enacted by the Ruler of the Emirate concerned.[43] In the event of conflict, Federal laws supersede local laws.[4445] Therefore, a sample definition of FIDIC Laws in Abu Dhabi should include Abu Dhabi laws *and* Federal laws of the UAE as applied in Abu Dhabi.

From experience, FIDIC definitions are frequently overlooked in EOT claim submissions.

2.2 Commencement of Works, Time for Completion and Taking Over

Sub-Clauses 8.1 (Commencement of Work) and 8.2 (Time for Completion) describe the start and duration of the Works.

Within 42d (or any other period stated in the Appendix to Tender) of the issue of the Letter of Acceptance, the Engineer must give minimum 7-day notice of the Commencement Date. The Contractor should proceed *'with due expedition and without delay'*. The Right of Access to the Site (Sub-Clause 2.1) should be given within the period stated in the Appendix. Since FIDIC defines *day* as a calendar day, all periods include weekends and holidays.

Time for Completion covers all the work necessary for Taking-Over of the Works (Sub-Clause 10.1), including the Tests on Completion (Clause 9). This is frequently overlooked by inexperienced UAE contractors as testing/commissioning activities take several months and involve authorities whose regulations are part of *Laws*. The Particular Conditions may include a more detailed list of the work to be completed, in addition to the construction and tests.[46]

If Sections of the Works are required to be completed before the overall Time for Completion, they should be described in the Appendix, with the Time for Completion and delay damages for each Section.

2.3 Programme and progress reporting

Sub-Clause 8.3 (Programme) requires the Contractor to submit a detailed programme to the Engineer within 28d from the commencement notice. The programme should be bound to the calendar, including any restrictions (UAE summer periods, Ramadan reduced hours).

---

[43] Essam Al Tamimi, *Practical Guide to Litigation and Arbitration in the United Arab Emirates* (Kluwer Law International, UK, 2003), para 1.2.4 (The Judicial Arrangements), p 4
[44] Ibid
[45] see Dubai Court of Cassation Judgment 324/2001 dated 25 November 2001
[46] Brian Barr and Leo Grutters (originally by Brian Totterdill), *FIDIC Users' Guide* (ICE Publishing, UK, 2014), chapter 14, p 169

The programme must address work sequencing, design, procurement, manufacture/testing, inspections, Subcontractors, allocated personnel/equipment. The Particular Conditions may further impose specific software and formats, which should be adequately priced.

The Engineer is not required to approve the Contractor's programme. He may comment within 21d and request a revised programme that complies with the Contract. The Contractor may periodically update the programme due to adjusted methods of work, but any delays in the updated programme cannot change contractual obligations and non-commenting by the Engineer does not constitute an acceptance of a later completion date.[47]

The Contractor is not encouraged to work ahead of the programme. The Employer's Personnel are entitled to rely on the programme when planning their activities, and the Engineer may not be ready to expedite drawings or increase the inspection coverage.

The Contractor is required to give *'prompt'* warning notices to the Engineer of any *'events or circumstances which may adversely affect the work'*. Early warnings are additional to claim notices.

Sub-Clause 4.21 (Progress Reports) details the requirements for Contractor's monthly progress reporting, which is a sensitive task that generates contemporary records.

Sub-Clause 8.6 (Rate of Progress) allows the Engineer to request for a revised programme where Contractor's progress falls behind the programme.

UAE-specific issues are further discussed in Chapter 3.

2.4 Extension of Time for Completion, delay events and damages

Sub-Clause 8.4 (EOT for Completion) lists the situations, or events, that may entitle the Contractor to an extension of the Time for Completion. It is not sufficient for the event to cause delay; the Contractor must demonstrate that taking-over *'is or will be delayed'*. In FIDIC-1987 ***ICC Case 10847*** **(2003)**,[48] the tribunal confirmed that *'delay to an activity or sequence of events that are not critical activities or critical sequences do not fairly entitle the Claimant to an EOT.'*

[47] Ibid, p 171
[48] ICC Case No. 10847 (2003), published in the ICC Court of Arbitration Bulletin Vol 23/No 2 -2012, page 34

Delay events may arise from:

(a) Variations

The Engineer may instruct a variation (13.1, Right to Vary), and may request a proposal ahead of instruction (13.3, Variation Procedure). In the absence of instruction/proposal, the Contractor may claim if there is a change in the quantity, quality, dimensions, method, or sequencing of the Works.

(b) Other Sub-Clauses

Several sub-clauses expressly entitle the Contractor to an extension of time and, in most cases, money (Table 1).

(c) Exceptionally adverse climatic conditions

Adverse weather must be measured and demonstrated to be 'exceptional' against the 'normal' weather, which may cover a several-year period. Adverse weather may result in additional time, but not money; it is explicitly excluded from Sub-Clause 4.12 (Unforeseeable Physical Conditions).

(d) Shortages of personnel or Goods

Shortages are difficult to prove, especially in the well-supplied market such as UAE; they must be Unforeseeable.

(e) Employer (and Engineer's) actions

Employer causes broadly include *'any delay, impediment or prevention caused by or attributable to the Employer, the Employer's Personnel, or the Employer's other contractors'*, in addition to specific causes from Sub-Clauses 17.3 (Employer's Risks) and 17.4 (Consequences of Employer's Risks). The Employer's Personnel includes the Engineer and his assistants (1.1.2.6).

Sub-Clause 8.5 (Delays Caused by Authorities) further allows for extension where *'legally constituted public authorities'* interfere with the Works. For clarity, privatized public authorities may be covered by Particular Conditions. The Contractor must always prove that proper procedures were followed and interference was Unforeseeable.

Contractor's Entitlement to EOT, Cost and Profit under Red Book				Entitlement under Yellow Book
Sub-Clause	EOT	Cost	Profit	
1.9 Delayed Drawings or Instructions	√	√	√	√ 1.9 Error's in the Employer's Requirements
2.1 Right of Access to the Site	√	√	√	√
4.7 Setting Out	√	√	√	√
4.12 Unforeseeable Physical Conditions	√	√	x	√
4.24 Fossils	√	√	x	√
7.4 Testing	√	√	√	√
8.4 Extension of Time for Completion	√	x	x	√
8.5 Delays Caused by Authorities	√	x	x	√
8.9 Consequences of Suspension	√	√	x	√
9.2 Delayed Tests	√	√	√	√
10.3 Interference with Tests on Completion	√	√	√	√
13.1 Right to Vary and 13.3 Variation Procedure	√	√	√	√ Includes design variations
13.5 Provisional Sums	√	√	√	√
13.7 Adjustments for Changes in Legislation	√	√	x	√
16.1 Contractor's Entitlement to Suspend Work	√	√	√	√
17.4 Consequences of Employer's Risks	√	√	√ Only in two cases: (1) Unauthorized taking over, and (2) Employer's design errors	√
19.4 Consequences of Force Majeure	√	√ Only in some cases	x	√

Table 1 - Summary of FIDIC Delay Events and Contractor's Entitlement to EOT, Cost and Profit

Finally, Sub-Clause 20.1 (Contractor's Claims) is sufficiently general to cover other delay events that the Contractor might rely on, *'under any Clause of these Conditions or otherwise in connection with the Contract'*.

In the absence of an EOT, Sub-Clause 8.7 (Delay Damages) and Appendix to Tender define the amount to be paid by the Contractor for each day of delay, up to a pre-defined limit (usually 10% of the Contract Price). Delay Damages replace actual losses incurred by the Employer as they *'shall be the only damages due from the Contractor'*. This is further discussed in Chapter 4.

2.5 Contractor's claims for EOT and associated costs

Sub-Clause 20.1 (Contractor's Claims) requires the Contractor to give notice to the Engineer of any claim *'as soon as practicable, and not later than 28d after the Contractor became aware, or should have become aware, of the event or circumstance'*. Failure to give notice results in loss of entitlement and *'the Employer shall be discharged from all liability in connection with the claim'*. Time bar provisions are discussed in Chapter 4.

All notices must comply with Sub-Clause 1.3 (Communications). They should be in writing and use of electronic communications should be pre-agreed in the Particular Conditions. There is no mandatory form of delay notice, but it should describe the delay event, timing, cause, responsibility, estimated duration and adverse effects, without detailed calculations.[49] Notices should be listed in Contractor's monthly reports (4.21, Progress Reports).

The Contractor must keep contemporary records to substantiate the claim; the Engineer may (but is not obliged to) inspect them or request copies. The Engineer may also keep his own records, without sharing them with the Contractor. Contemporary records are the key to decision making and the Engineer should clarify them rather sooner than later. Contemporary records are further discussed in Chapter 4.

A fully detailed Contractor's claim should be submitted within 42d of the event and this period runs concurrently with the notification time bar. The Engineer must respond (approve/disapprove) on the principles of the claim within another 42d. He may request for further substantiation, but should nevertheless decide in principle.[50] The Engineer may propose and the Contractor may accept even longer periods (not recommended).

The Engineer decides on the claim principle and details and cannot delegate this task (Sub-Clause 3.5, Determinations). He should consult with the Parties and agree/determine separately: (i) the EOT and/or (ii) the additional payment. He should review previous determinations and may increase, but not decrease, the total EOT (Sub-Clause 8.4).

---

[49] Keith Pickavance, *Delay and Disruption in Construction Contracts* (3rd Edition, LLP Professional Publishing, London-Singapore, 2005), para 5.85 (Notices, Claims and Early Warnings), p 158-159

[50] Brian Barr and Leo Grutters (originally by Brian Totterdill), *FIDIC Users' Guide* (ICE Publishing, UK, 2014), chapter 26, p 265

As a result of Sub-Clauses 8.4 and 20.1, claims for extension of the Time for Completion and associated costs should be notified and submitted separately.[5152]

The Engineer's decision on the claim is binding. Approved amounts are included in Payment Certificates and the Employer should pay (14.7, Payment), or face the finance charges (14.8, Delayed Payment). The **ICC Case 10619 (2001)**[53] expressly confirmed that binding Engineer's decisions, even if not final, are enforceable.

Either Party may declare dissatisfaction and raise a dispute (20.4, Obtaining DAB's decision). There is no time limit for referring a dispute to the DAB, and this has been criticized.[54] DAB's decision then becomes binding until further revised by agreement (20.5, Amicable Settlement) or arbitration (20.6, Arbitration).

2.6 Employer's time-related claims

Sub-Clause 2.5 (Employer's Claims) enables the Employer to notify any claim for an extension to the Defects Notification Period or for Contractor's payments. This means that Employer should notify prior to deduction of delay damages as per Sub-Clause 8.7.[55] Employer's claims should be notified *'as soon as practicable'* (no time bar) and agreed/determined by the Engineer under Sub-Clause 3.5 (Determinations). There is no requirement for the Contractor to respond to Employer's claim notices.

Amounts determined by the Engineer may be deducted from Payment Certificates, subject to certain conditions. The Employer does not have a general right of set-off unless his claim complied with Sub-Clause 2.5 (proper notification and sufficient elaboration of the set-off intention) and Engineer's determination (fair assessment including consultation with both parties). A different decision, reached in the FIDIC-1999 **ICC Case 11813 (2002)** under

---

[51] Christopher Seppala, *Contractor's claims under the FIDIC civil engineering contract, Fourth (1987) Edition* (International Business Law Journal, 1991), page 19

[52] Dr. Götz-Sebastian Hök, *FIDIC Claim Management,* 2014, <http://www.dr-hoek.de/EN/beitrag.asp?t=FIDIC-Claim-Management> accessed 10-09-2014

[53] ICC Case No. 10619 (2001)

[54] ECV Limited, *The Practical Management of Contract Claims and the Resolution of Disputes under the 1999 FIDIC Contracts and the 2007 Abu Dhabi Government Conditions of Contract*, Proceedings from a two-day specialized FIDIC seminar led by David Heslett and Brian W Totterdill, Abu Dhabi, UAE, 21-22 April 2008

[55] ECV Limited, *The Practical Use of the 1999 FIDIC Conditions of Contract under the 1999 FIDIC Contracts and Aide Mémoire on the Multi-lateral Development Banks' Harmonised Construction Contract 2006 and the 2007 Abu Dhabi Government Conditions of Contract*, Proceedings from a two-day specialized FIDIC seminar led by Brian W Totterdill, Abu Dhabi, UAE, 22-23 March 2010

English law, was heavily criticized by legal commentaries as a mistake and misinterpretation of FIDIC's intention.[56] While the Tribunal in this case recognized that the Employer might have breached Sub-Clause 2.5, it held that nothing in that Sub-Clause or any of the other Sub-Clauses referred to an exclusion of the Employer's right of set-off (as strictly defined under English law in the **Housing Grants, Construction and Regeneration Act 1996**). This decision considered FIDIC and English law positions to be equal in regard to set-off, which is not the case. In general, it is viewed by most relevant authors and practitioners, including the author of this publication, that FIDIC views of set-off are more conservative than the English **HGCRA**[57] and not fully straightforward. Without a clear notification of Employer's claim and proper Engineer's determination in accordance with the contract, the Employer should not experiment with deductions from the Payment Certificate.

[56] ICC Case No. 11813 (2002), criticized in the ICC Court of Arbitration Bulletin Vol 24/No 2 -2013, page 57
[57] Housing Grants, Construction and Regeneration Act 1996, s. 111

3 Critique of UAE contract practice for time management

The current contract practice on UAE projects has been reviewed and benchmarked against practice guides and FIDIC requirements and improvements have been suggested.

3.1 Analysis of UAE contract practice

The recent **UAE Study (2010)**[58] investigated 42 potential delay factors through a questionnaire sent to 50 UAE companies. Client-related factors (change orders, slow decision making, lack of capability) and poor contract practice (planning/estimating, contract administration) contributed to delays. This aligns with CIOB's findings (Chapter 1).

Another **Case Study (2009)**[59] researched the causes of delay on 3 projects (late sub-contractor nomination, improper task/resource planning, lack of risk management).

The **Dissertation Study (2012)**[60] interviewed UAE practitioners, revealing problems with contemporary records. Claims lacked in completeness and clarity due to inefficient document systems.

The **Study on Construction Claims (2006)**[61] examined 124 UAE claims. Interviewed municipality experts recommended to link constructability with project planning and improve contract administration. The role of 'risk-sharing philosophy' was highlighted in the responses.

Own experience from FIDIC-based building projects (2010-2015) has been summarised and tabulated below, covering project planning (Table 2a), progress reporting (Table 2b) and EOT claims (Table 2c). Project configurations (basements, podiums, typical floors) and use (residential, offices, hotels) are indicated in the tables.

---

[58] Omayma Motaleb and Mohammed Kishk, *An investigation into causes and effects of construction delays in UAE*, Egbu, C. (Ed) *Proceedings 26th Annual ARCOM Conference,* 6-8 September 2010, Leeds, UK, Association of Researchers in Construction Management, 1149-1157

[59] Shaikh Asif Abdus Saeed, *Delay to Projects – Cause, Effect and Measures to Reduce/Eliminate Delay by Mitigation/Acceleration,* Dissertation submitted 2009 at the Institution of Business, The British University of Dubai

[60] Nael Maher Zubaida, *Claims Management and Substantiation in the UAE Construction Sector,* Dissertation MSc Project Management, Faculty of Business, The British University of Dubai, May 2012

[61] Essam K. Zaneldin, *Construction claims in United Arab Emirates: Types, causes, and frequency,* Elsevier International Journal of Project Management 24 (2006) 453–459

Item	Projects									
	1	2	3	4	5	6	7	8	9	10
Project Details										
Project type	Residential	Offices	Residential	Residential	Residential	Residential	Residential	Residential	Hotel	Residential
Configuration and built-up area (m2)	3B+G+3P+HC+MEP+38F (77,939m^2)	6B+G+3P+MEP+34F (90,713.3m^2)	3B+G+25F (65,257m^2)	1B+G+1P+10F (115,099m2)	3B+G+11F (16,754m^2)	3B+G+9F, 3B+G+7 (38,889m^2)	3B+G+39F (45,619m^2)	2B+GF+5P+34F+R (37,433m^2)	5B+3B+35F (70,200m2)	1B+GF+28F + R (36,865m^2)
Contract duration	24m	22m	22m	24m	18m	22m	24m	24m	36m	22m
Conditions of contract	FIDIC 1987	FIDIC 1987	FIDIC 1999	FIDIC 1999	FIDIC 1999	FIDIC 1987	FIDIC 1987	FIDIC 1987	FIDIC 1999	FIDIC 1999
Baseline Programme										
Method statement	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
WBS level (1-6)	L5	L5	L5	L5	L5	L4	L5	L5	L5	L5
No of activities	4,037	3,678	8,190	11,767	2,709	2,536	6,741	6,218	6,895	3,345
No of open ends	2	2	2	2	2	2	5	5	2	2
No/% of long activities (>28d)	156 (3.8%)	133 (3.6%)	215 (2.6%)	2,037 (17.3%)	59 (2.1%)	137 (5.4%)	1,084 (16.1%)	1,036 (16.6%)	384 (5.5%)	261 (7.8%)
No/% of short activities (<7d)	842 (20.8%)	724 (19.7%)	4,213 (51.4%)	2,998 (25.5%)	2,068 (76.3%)	564 (22.2%)	1,813 (26.9%)	1,493 (24%)	1,885 (27.3%)	804 (24%)
No/% of excessive total floats (>28d)	1,533 (37.9%)	1,324 (36.0%)	2,836 (34.6%)	6,774 (57.5%)	1,012 (37.3%)	1,103 (43.5%)	4,726 (70%)	5,237 (84%)	4,263 (61.8%)	1,267 (37.9%)
No/ % of critical activities	120 (2.9%)	121 (3.3%)	416 (5.0%)	741 (6.3%)	334 (12.3%)	86 (3.4%)	185 (2.7%)	135 (2.2%)	475 (6.9%)	1,087 (32.5%)
Milestones provided	19	21	72	39	11	11	65	65	48	49
Resources, costs	Loaded	Loaded	Loaded	Loaded	Loaded	High level	Loaded	Loaded	Loaded	Loaded
Different calendars	Yes, 5d-6d	Yes, 5d-6d	Yes, 5d-6d	Yes, 5d-6d	Yes, 5d-6d	Yes, 5d-6d	Yes, 5d-6d	Yes, 5d-6d	Yes, 5d-6d	Yes, 5d-6d
Provisional Sum and time contingency	PS–Nil. Cont.=float.	PS–Nil. Cont.=float.	PS–Yes. Cont.=float.	PS–Yes. Cont.=float.	PS–Yes. Cont.=float.	PS–Yes. Cont.=float.	PS–Yes. Cont.=float.	PS–Yes. Cont.=float.	PS–Yes. Cont.=float.	PS–Yes. Cont.=float.
Number of baseline iterations; comments	3; Authority approvals, missing scope, finishes	4; Authority approvals, missing scope, finishes	6; Authority approvals, missing scope, finishes	4; Authority approvals, missing scope, finishes	5; Incorrect approval sequence; key trades not linked	3; Finishes, MEP not as per industry standards	5; Trades not linked properly, conflicts	5; Trades not linked properly, conflicts	6; Approval sequencing, missing scope, finishes	5; Approval sequencing, missing scope, finishes

Table 2a - Programme Quality (UAE Projects)

Progress Reporting	1	2	3	4	5	6	7	8	9	10
Actual dates presented, % complete shown	Yes; Physical %	Yes; Physical %	Yes; Physical %	Yes; Physical %	Yes; Physical %	Yes; Physical %	Yes; Physical %	Yes; Physical %	Yes; Physical %	Yes; Physical %
Logic changes (adjusted construction methods)	Yes	Yes	Yes	Yes	Yes	Nil	Yes	Yes	Yes	Yes
Float monitored	Weekly tracker	Weekly tracker	Weekly tracker	Weekly tracker	Weekly tracker	Monthly	Weekly tracker	Weekly tracker	Weekly tracker	Weekly tracker
S-curve provided (cost, effort)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Detailed cost report, earned value	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Summary dashboard	By Engineer	By Engineer	By Engineer	By Engineer	By Engineer	By Engineer	By Engineer	Yes	By Engineer	By Engineer
Risk workshops (time)	Occasional	Occasional	Occasional	Occasional	Occasional	Weekly meetings	Occasional	Occasional	Occasional	Occasional
Submissions and approvals tracked	Yes	Yes	Yes	Yes	Yes	Nil	Yes	Yes	Yes	Yes
Weekly reports available	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Table 2b - Progress Reporting (UAE Projects)

EOT Claims (Time)	1	2	3	4	5	6	7	8	9	10
EOT claims submitted	7	7	3	1	12	3	9	9	2	1
EOT claims notified	31	31	3	3	53	3	89	81	2	1
Delay analysis method used to calculate EOT	Windows analysis	Windows analysis	Windows analysis	Simple time impact analysis	Impacted as planned	Impacted as planned	Impacted as planned	Impacted as planned	Simple time impact analysis	Simple time impact analysis
EOT claimed (days)	151d	212d	299d	85d	339d	264d	403d	399d	104d	118d
EOT approved (days)	151d	212d	215d	Under review	339d	264d	222d	217d	82d	91d
EOT entitlement - accepted items	3	3	1	1	7	Variations; authority delays	3	3	1	Delay in site possession
EOT entitlement - rejected items	28; contractor design, delay events not critical, poor substantiation/ records	28; contractor design, delay events not critical, poor substantiation/ records	2; delay events not critical, lack of substantiation/ records	-	21; contractor design, delay events not critical, poor substantiation/ records	2; delay events not critical, lack of substantiation/ records	12; contractor design, delay events not critical, poor substantiation/ records	12; contractor design, delay events not critical, poor substantiation/ records	1; works within Contractor's original scope	Nil
Quality of submission (basis, cause, effect)	Good, as per industry standards	Good, as per industry standards	Reasonable, as per industry standards	Reasonable, as per industry standards	Up to industry standards	Poor	Reasonable; not up to industry standards	Reasonable; not up to the industry standards	Reasonable, as per industry standards	Reasonable, as per industry standards
EOT Claims (Cost)	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
Costs claimed (AED)	-	-	17m	Not yet	5.4m	5m	14m	12m	Not yet	Not yet
Costs approved (AED)	-	-	0	-	2.7m	0	0; Concurrent delays	0; Concurrent delays	-	-
Entitlement (accepted)	-	-	Nil	-	Variations, auth. delays	Nil	Nil	Nil	-	-
Quality of submission (details, actual costs)	-	-	Poor, not as per industry standards	-	Poor; Engineer determined	Poor, lack of substantiation	Poor, not as per industry standards	Poor, not as per industry standards	-	-
Remark	Project competed	Project completed	Project in progress	Project in progress	Project completed	Project completed	Delay Damages applicable	Delay Damages applicable	Project in progress	Project in progress

Table 2c - EOT Claims (UAE Projects)

The following key observations are highlighted, based on surveyed projects:

- **Programmes** do not capture all contract requirements and methods of work, in spite of the complexity (10,000+ activities per project). Long (>28d) and short (<7d) activities are not optimised, while excessive total floats (>28d) invite for disputes about float utilisation. There is no strategy for time contingencies.

- **Progress reporting** satisfies basic FIDIC requirements (charts, photographs, submission logs, safety statistics), but without a view of creating contemporary records for EOT claims. Web-based document management systems are used with non-customised workflows/forms.

- **Methods for delay analysis** are not selected with respect to actual circumstances. Delay calculations frequently rely on the original (as-planned) programme, even if such programme may be flawed, increasing claim rejections (Table 2c).

- **Methods for calculation of delay costs** vary from the industry standards (Table 2c).

- **EOT claim submissions** fall behind the industry standards (Table 2c).

- **Risk management techniques** are not applied to the full potential.

Each of the above points is briefly addressed below, based on practice guides, case law and FIDIC requirements.

Where possible, good practice is explained and generally recommended for all construction projects and not just for those executed within the UAE.

3.2 Programming methodology and quality of the programme

Good practice guides (SCL,[62] PMI[63]) and experience suggest the following approach:

- Programme should be developed using the network scheduling methodology, the *Precedence* method (works are modelled by activity nodes and logical relationships); this suits the most popular scheduling software (*Oracle Primavera)*.

- Programme should contain enough detail to communicate the intended methodology for each trade in each area of the work, supported with:

    - Narrative and sketches explaining the method of project execution: logistics plans, method statements, cycle analysis, workflows, etc;

    - Narrative outlining the scheduling approach: contractual requirements (Provisional Sums, milestones, review/approval periods), progress measurement (physical, financial);

    - Activity ID structure: (ProjectCode)-(Phase)-(Discipline)-(Floor/Location)-(ActivityNo);

    - Calendars with holidays and reduced working hours (summer, Ramadan);

    - Productivity rates used to calculate durations;

    - Manpower histograms;

    - S-curves (effort, costs, Earned Value);

    - Work Breakdown Structure, up to 6 levels,[64] such as: (1) Phase, (2) Building/Location, (3) Discipline/Trade, (4) Activity Groups, (5) Detailed Activities, (6) Micro Activities; level 5 is appropriate for FIDIC contracts;

---

[62] Society of Construction Law (SCL), *Delay and Disruption Protocol,* October 2002, reprinted October 2004, available at <http://www.scl.org.uk/resources> accessed 26-07-2014

[63] Project Management Institute, *Practice Standard for Scheduling,* 2nd Edition, PMI, USA, 2011

- Derived reports, e.g. Line of Balance, to explain movement of crews;

- Baseline Gantt Chart, showing: Activity ID/Description, Original Duration, Early/Late Start/Finish, Total Float, while updates should add: Current Duration, Actual Start/Finish, %Complete. The longest (critical) path must be highlighted.[65] Programme presentations may further benefit from 3D BIM standards,[66] which became mandatory on UK public projects starting from 2016.[67]

- Quality checks: activities (no missing tasks), logic (meaningful), calendars (resources, activities), leads/lags (no unreasonable waiting times), constraints (based on contract requirements), floats (no excessive floats, no negative floats), long durations (>28d to be justified), resource loading (resources, costs), near critical path (float≈0).

- Contractor's time contingencies should be included as separate activities, as opposed to relying on activity floats.

Examples of the above documents are shown in **Appendix 6.1**, for illustration and guidance.

Some influential authors, like Pickavance,[68] recommend to price the programme development separately in the Tender Documents due to its complexity and significance.

3.3 Progress reporting and maintenance of contemporary records

The **CIOB Study (2008)**[69] revealed that 49% of respondents attempt to perform delay analysis on a Programme that is not updated! This is against the practice guides; according to the SCL Protocol, *'the programme should be updated to record actual progress and any*

---

[64] CIOB and Hill International, *Masterclass – Manage, Analyse and Avoid Construction Delay & Disruption in a Changing Economic Climate*, Proceedings from a two-day seminar led by Keith Pickavance, Abu Dhabi, UAE, 2-3 June 2009

[65] Royal Institution of British Architects (RIBA), *Good Practice Guide: Extensions of Time* (RIBA Publishing, UK, 2008), page 66

[66] Royal Institution of Chartered Surveyors (RICS), *Extensions of Time* (1st Edition (Draft), RICS Professional Guidance Note, UK, 2014), page 15

[67] Andrew Baldwin, David Bordoli, *A Handbook for Construction Planning and Scheduling* (Wiley Blackwell, UK, 2014), page 6 - New information and communication technologies

[68] Keith Pickavance, *Delay and Disruption in Construction Contracts* (3rd Edition, LLP Professional Publishing, London-Singapore, 2005), at 7.130, page 229

[69] CIOB, *Managing the Risk of Delayed Completion in the 21st Century*, Research published in 2009, available at <http://www.ciob.org/sites/default/files/CIOB%20research%20-%20Managing%20the%20Risk%20of%20Delayed%20Completion%20in%20the%2021st%20century.pdf> accessed 25-07-2014

EOT granted...then...used as a tool for determining EOTs'.[70] Practice guides offer comprehensive advice on how to maintain the programme so that it remains suitable for EOT calculations.[7172]

The critical path (the longest path that drives project completion) may change in the updated programme, and English courts have acknowledged the dynamic nature of the programme.[73] In ***Balfour Beatty v Chestermount Properties (1993),***[74] Colman J said that power to grant an EOT should give due regard to the incidence of the developer's time risk events, measured by the standard of what is fair/reasonable. In ***Henry Boot Construction v Malmaison Hotel (1999),***[75] assessment of delay was based on a revised programme where the work affected by the developer was not on the critical path.

In line with good practice, FIDIC Sub-Clause 4.21 (Progress Reports) requires the following monthly report submissions:

- charts/descriptions of progress for each stage (design, construction, procurement, manufacture, delivery, erection, testing);
- photographs;
- status of manufacture and progress on site for key equipment/materials;
- details of Contractor's Personnel and Equipment;
- QA/QC records;
- list of claim notifications;
- safety statistics;
- comparisons of actual and planned progress.

---

[70] Society of Construction Law (SCL), *Delay and Disruption Protocol,* October 2002, reprinted October 2004, available at <http://www.scl.org.uk/resources> accessed 26-07-2014
[71] Project Management Institute, *Practice Standard for Scheduling,* 2nd Edition, PMI, USA, 2011
[72] Andrew Baldwin, David Bordoli, *A Handbook for Construction Planning and Scheduling* (Wiley Blackwell, UK, 2014)
[73] Keith Pickavance, *Delay and Disruption in Construction Contracts* (3rd Edition, LLP Professional Publishing, London-Singapore, 2005), at 9.26, page 288
[74] *Balfour Beatty Building Ltd v Chestermount Properties Ltd* [1993] 62 BLR
[75] *Henry Boot Construction (UK) Ltd v Malmaison Hotel (Manchester) Ltd* [1999] 70 Con LR 32

If actual progress is too slow, Sub-Clause 8.6 (Rate of Progress) allows the Contractor to revise the Programme. If slow progress is caused by the Employer, this should be documented.

As FIDIC does not prescribe reporting variables and formats, some recommendations are provided in **Appendix 6.2**. Advanced reporting techniques (Earned Value, online dashboards) are helpful, but not essential for delay analysis. Visuals generated by site Web cameras (photos/videos, weather trackers) could be useful.

Web-based document management systems may facilitate claim research and increase availability of progress reports and other contemporary records, such as: correspondence, meeting minutes, inspection records, requests for information, instructions, drawings, material submissions, delivery documents, etc.

3.4 Methods for analysis of delay time

There are a number of methods for analysing delays, with varying complexity. These are not fully standardized and there are differences between practice guides.

FIDIC (and other) forms are silent about preferred delay analysis methods.

Simple methods

The purpose of delay analysis should be to determine the cause of delay and its effects, not to complicate.[76] In ***P&O Developments v The Guy's and St Thomas' NHS Trust (1982)***,[77] the judge asked *'what an informed person in the building industry (not the man on the street) would take to be the cause without too much microscopic analysis but on a broad view*'.

Simple ways of assessing delays include **overview of the facts** and **comparison of actual and planned progress (as-planned v as-built)**.[78] These simple methods rely on contemporary records to provide 'proof by inference',[79] but such approach works *'only if all*

---

[76] Keith Pickavance, *Delay and Disruption in Construction Contracts* (3rd Edition, LLP Professional Publishing, London-Singapore, 2005), page 490
[77] *P&O Developments Ltd v The Guy's and St Thomas' NHS Trust* [1999] BLR 3
[78] Royal Institution of Chartered Surveyors (RICS), *Extensions of Time* (1st Edition, RICS Professional Guidance Note, UK, 2014), page 13
[79] Keith Pickavance, *Delay and Disruption in Construction Contracts* (3rd Edition, LLP Professional Publishing, London-Singapore, 2005), page 490

other activities proceeded according to programme,' as stated by Judge Hicks QC in ***Ascon Contracting v McAlpine Construction (1999).***[80]

In reality, a more detailed analysis of the critical path is usually required in addition to simple inference.

Prospective time impact analysis

Delays should preferably be analysed as they occur ('prospectively',[81] 'contemporaneously'),[82] taking account of the actual critical path(s) in the updated programme.

The SCL Protocol and English courts have adopted the view that this is the desired method.[83] In ***Balfour Beatty v Lambeth LBC (2002),***[84] Judge Lloyd QC mentioned the importance of *'the original programme'* and *'soundness of its revisions on the occurrence of every event'* when analysing causes and effects*; 'a valid critical path (or paths) has to be established both initially and at every later material point since it (or they) will almost certainly change.'*

Such prospective real-time approach is known as **time impact analysis**[85] and includes chronological 'impacting' of each delay event onto the updated programme in order to assess the effect. The programme is impacted by using the contemporary records.

The principal problem is extreme complexity if there are multiple causes of delay each of which needs to be analysed independently.[86] In fact, as noted in ***Adyard Abu Dhabi v SD Marine Services* (2011),**[87] this method has not been fully applied in any reported case.[88] The

---

[80] *Ascon Contracting Ltd v Alfred McAlpine Construction Isle of Man Ltd* [1999] 66 Con LR 119 at p. 146
[81] Roger Gibson, *Construction Delays – Extensions of Time and Prolongation Claims* (Taylor & Francis, UK, 2008), page 175, para C. Prospective analysis
[82] Keith Pickavance, *Delay and Disruption in Construction Contracts* (3rd Edition, LLP Professional Publishing, London-Singapore, 2005), page 495, paragraph 14.28
[83] Ibid
[84] *Balfour Beatty Construction Ltd v The Mayor And Burgesses of the London Borough of Lambeth* [2002] 1 BLR 288 at p. 302
[85] Roger Gibson, *Construction Delays – Extensions of Time and Prolongation Claims* (Taylor & Francis, UK, 2008), page 175
[86] Jane Jenkins, *International Construction Arbitration Law* (2nd Edition, Kluwer Law International BV, The Netherlands, 2014), page 225
[87] *Adyard Abu Dhabi v SD Marine Services* [2011] EWHC 848, paras 289-290
[88] Jane Jenkins, *International Construction Arbitration Law* (2nd Edition, Kluwer Law International BV, The Netherlands, 2014), page 226

UK Survey (2013)[89] confirmed that prospective approach is hardly adhered to in practice, and the top contributory reason is lack of adequate project records.

Retrospective methods

Where the prospective time impact analysis is not feasible, some form of retrospective delay analysis can be applied.

The windows (time slice, snapshot) analysis method evolves from prospective time impact analysis. The total project duration is divided into a number of consecutive time periods, or windows, which can match the reporting periods. The smallest window possible is one that contains only one delaying event and that equates to time impact analysis without windows.[90] The programme is updated at the end of each window, and delays are investigated and apportioned between the employer and the contractor.[91] This is viewed as systematic and objective method, which uses the contemporary critical path within each window.[92]

The as-planned expanded (impacted) method takes the original as-planned programme and adds to it the effects of delay events. These events and their durations are assessed by the expert from the material available, which may become subjective. Furthermore, the results are flawed if the original programme was poor and/or the methods of work have changed.[93] It may work if the original programme and its critical path remain steady, which is rarely the case.

The as-built collapsed (subtracted, as built but for) method takes what factually happened, the as-built programme, and deducts actual delay events in order to assess the earliest date at which the work could have been completed without their effects. This method demands considerable time and effort to develop the as-built model and sometimes involves

---

[89] Nuhu Braimah, *Approaches to Delay Claims Assessment Employed in the UK Construction Industry*, Civil Engineering Department, School of Engineering and Design, Brunel University, UK, Article in Buildings 2013, 3, 598-620, 11 September 2013

[90] Andrew Baldwin, David Bordoli, *A Handbook for Construction Planning and Scheduling* (Wiley Blackwell, UK, 2014), page 325

[91] Roger Gibson, *Construction Delays – Extensions of Time and Prolongation Claims* (Taylor & Francis, UK, 2008), page 180

[92] James R Knowles (Middle East), *Proceedings from the Training Course for Delay Analysis*, Presented by Coling Smith, Dubai, UAE, 23 September 2002

[93] Jane Jenkins, *International Construction Arbitration Law* (2nd Edition, Kluwer Law International BV, The Netherlands, 2014), page 223

the subjective expert reasoning in regard to the as-built critical path(s) and relationships.[94] The acceptability increases with the more accurate site records.

Practical comparison of above methods is provided in **Appendix 6.3**. Windows analysis should be used wherever possible as it became the most accepted method in practice,[95] even though there is still no precise definition amongst experts, see ***Costain v Charles Haswell* (2009)**.[96]

In FIDIC contracts, the windows analysis method can (and should) be applied progressively on a monthly basis using the updated programme and contemporary records.

3.5 Breakdown of delay costs

It is a common mistake to link time and money in delay situations. The SCL Protocol states that *'entitlement to an EOT does not automatically lead to entitlement to compensation (and vice versa)*'.[97] Additional monies may be recovered even without prolongation, and, conversely, a contractor may receive an EOT and still not be entitled to additional financial recovery.[98]

In FIDIC contracts, time and money claims should be notified and submitted separately, and Contractor's entitlement to Cost (*'all expenditure reasonably incurred, including overheads'*) and/or profit varies (Chapter 2).

Delay costs are time-related costs associated with delays. There could also be additional **disruption costs** to cover the 'thickening'[99] of resources on non-critical activities. In the FIDIC-based **ICC Case 12654 (2005)**,[100] the tribunal explained that *'pure delay costs'* arise due to the prolonged use of resources, while *'disruption costs'* are linked to *'unproductive manner'* of work or *'out of sequence'* work.

---

[94] Roger Gibson, *Construction Delays – Extensions of Time and Prolongation Claims* (Taylor & Francis, UK, 2008), page 179
[95] Andrew Baldwin, David Bordoli, *A Handbook for Construction Planning and Scheduling* (Wiley Blackwell, UK, 2014), page 325
[96] *Costain Ltd v Charles Haswell & Partners Ltd* [2009] EWHC 3140 (TCC)
[97] Society of Construction Law (SCL), *Delay and Disruption Protocol,* October 2002, reprinted October 2004, available at <http://www.scl.org.uk/resources> accessed 26-07-2014, para 1.6.2
[98] Ali Haidar and Peter Barnes, *Delay and Disruption Claims in Construction* (2nd Edition, ICE Publishing, UK, 2014), page 53
[99] Ibid, page 51
[100] ICC Case No. 12654 (2005), published in the ICC Court of Arbitration Bulletin Vol 23/No 2 -2012, page 38

Practice guides and experience suggest the following heads of claim for delay and disruption costs (sometimes called loss and expense).[101][102]

Site overheads (preliminaries)

On-site mobilization, running and demobilization costs may be identifiable within the 'Preliminaries' section of the Bills of Quantities (BOQ). Delay costs reflect the additional *running costs* during the EOT period; mobilization/demobilization costs are usually unaffected. Where the BOQ is not straightforward or there is no specified rate for running (delay) costs, which is usually the case, the actual delay costs should be calculated, having in mind the following items:

- site personnel (management, specialists, labour) and related expenses (e.g. travel) that are project-specific;
- site accommodation and/or offices, including any associated furniture and equipment (e.g. IT equipment);
- site temporary facilities (e.g. covered stores, workshops, maintained yards, truck washing facilities, and similar);
- site safety and security facilities (e.g. fences, gates, safety barriers, safety scaffolding, security and access equipment, site cameras, etc);
- contractor's equipment (e.g. tower cranes, mobile cranes, hoists, concrete plant, major scaffolding, dedicated formwork, etc);
- site temporary services (e.g. water supply, electricity supply, telecommunication systems, site sewage, site storm water drainage, etc), inclusive of mandatory maintenance and service charges;
- temporary protection of works and required environmental measures (e.g. mandatory sampling and testing);

[101] Ali Haidar and Peter Barnes, *Delay and Disruption Claims in Construction* (2nd Edition, ICE Publishing, UK, 2014), page 53

[102] Royal Institution of British Architects (RIBA), *Good Practice Guide: Assessing Loss and Expense* (RIBA Publishing, UK, 2013), page 40

- site administration and expenses (e.g. cleaning and removal of debris, payment of government fees and other services not mentioned above);

- maintenance of extended insurances and bonds in accordance with the contract;

- expenses for extended storage facilities, repeated testing and commissioning and extended warrantees for the works and built-in equipment.

In most cases, therefore, the actual costs incurred by the contractor should be claimed and not the prices of the preliminaries from the BOQ,[103] provided that resources were actually required on site (just presence of resources does not mean they are additional to the tendered ones!) and that contractor mitigated losses.[104] From the ***British Westinghouse v Underground Electric Railways* (1912)**,[105] the injured party must take all reasonable steps to mitigate losses, and cannot recover any loss which could have been avoided (e.g. inefficiency of resources, failure to apply simple mitigation measures, poor site management and similar are non-recoverable). Mitigation is further discussed in Chapter 4.

Actual costs should rely on the contemporary records; no unnecessary operating charges (repairs, parts, fuel) should be applicable and rental costs should reflect the stand-by or non-operational (idle) status. The costs should relate to the periods in which delay has occurred and only to the sequence of activities that were actually delayed (if some other activities progressed). The onus is on the contractor to prove that the costs claimed have been actually incurred and that every effort has been taken to minimise these costs.[106]

Head office overheads

These are administrative and management costs of running the head office, such as: rents, running/administration costs, transportation, salaries, depreciation, legal/professional fees. Entitlement to such general overheads is an arguable point.[107]

---

[103] Roger Knowles, *200 Contractual Problems and their Solutions* (3rd edition, Willey-Blackwell, UK, 2012), page 215
[104] Ali Haidar and Peter Barnes, *Delay and Disruption Claims in Construction* (2nd Edition, ICE Publishing, UK, 2014), page 55
[105] *British Westinghouse Electrical Manufacturing Co Ltd v Underground Electric Railways* [1912] AC 673
[106] Ali Haidar and Peter Barnes, *Delay and Disruption Claims in Construction* (2nd Edition, ICE Publishing, UK, 2014), pages 56-57
[107] Ibid, page 59

Following ***JF Finnegan v Sheffield City Council*** **(1988),**[108] contractor's off-site overheads claim should show that *'the workforce, but for the delay, might have had the opportunity of being employed on another contract which would have had the effect of funding the overheads during the overrun period.'*

The onus is on the contractor to prove that actual loss has been suffered.[109] In ***Peak Construction v McKinney Foundations*** **(1970)**[110] the contractor was asked to prove that there was other work available which, but for the delay, the contractor would have secured. Such loss of an opportunity is often very difficult to prove.[111]

The actual overhead costs must be reasonable.[112] In ***Tate & Lyle v Greater London Council*** **(1981)**,[113] damages for head office expenses were justified, but could not be recovered because of the failure to keep proper records; the court wanted to know who at head office was involved and what was the record of their time spent on the overrunning project. ***Babcock Energy v Lodge Sturtevant*** **(1994)**[114] reinforced the contractor's entitlement to recover head office overheads based upon accurately recorded costs.

Head office overheads are sometimes calculated by use of a formulae (Hudson's, Emden's in UK, Eichleay in US), which have found limited judicial and arbitral approval.[115] The SCL Protocol is sceptical about the use of formulae due to double-counting of overhead costs, especially where there are variations in works.[116] Variations usually include an element of overhead/profit, which causes the overlapping and double-counting of these costs.

---

[108] *J F Finnegan v Sheffield City Council* [1988] 43 BLR 124
[109] John Murdoch, Will Hughes, *Construction Contracts – Law and Management* (4th edition, Taylor & Francis, UK, 2008), page 231
[110] *Peak Construction (Liverpool) Ltd v McKinney Foundations Ltd* [1970] 1 BLR 111
[111] Roger Knowles, *200 Contractual Problems and their Solutions* (3rd edition, Willey-Blackwell, UK, 2012), page 214
[112] Royal Institution of British Architects (RIBA), *Good Practice Guide: Assessing Lass and Expense* (RIBA Publishing, UK, 2013), page 43
[113] *Tate & Lyle Food and Distribution Ltd v Greater London Council* [1981] 3 All ER 716
[114] *Babcock Energy Ltd v Lodge Sturtevant Ltd (Formerly Peabody Sturtevant Ltd)* [1994] 41 ConLR 45
[115] Royal Institution of British Architects (RIBA), *Good Practice Guide: Assessing Loss and Expense* (RIBA Publishing, UK, 2013), page 44
[116] Society of Construction Law (SCL), *Delay and Disruption Protocol,* October 2002, reprinted October 2004, available at <http://www.scl.org.uk/resources> accessed 26-07-2014, para 1.16.6 – 1.16.10

Loss of profit

In English law, economic loss must follow naturally from the breach or be within the reasonable contemplation of the parties at the time of contracting to be recoverable,[117] as per the second lag in ***Hadley v Baxendale* (1854);**[118] loss of profit, being economic loss, can be treated as 'special damages' and included in the claim.

Similarly to head office overheads, the contractor would need to show that he was prevented from earning profit elsewhere, see ***Peak Construction v McKinney Foundations* (1970)**,[119] and demonstrate the actual loss of profit that he would have earned on other contracts had there been no delay and disruption.[120] Rough estimates of profit margins based on the tender price are unlikely to be sufficient.[121] In ***Inserco v Honeywell Control Systems* (1996),**[122] the judge referred to Spon's industry norms and actual expectation in profit in Inserco's business.

Following ***Wraight v PH&T (Holdings)* (1968)**,[123] where the contractor's employment has been determined as a result of employer's default, the contractor is entitled to be reimbursed the amount of profit that he can prove that he would have made on that particular contract had he been allowed to complete the works, less the amount saved because of the removal of his contractual obligation.

Loss of profit is very difficult to prove and recovery may depend on the applicable law (Chapter 4). In FIDIC forms, loss of profit is expressly excluded for some delay events (Chapter 2).

Increased resource costs due to delay (inflation)

This head of claim usually arises on a fixed price contract, or where a fluctuation recovery has been agreed.[124] The claim should cover the excess necessarily incurred as a direct

---

[117] Ewan McKendrick, *Contract Law – Text, Cases and Materials* (5th edition, Oxford University Press, 2012)
[118] *Hadley v Baxendale* [1854] 156 ER 145
[119] *Peak Construction (Liverpool) Ltd v McKinney Foundations Ltd* [1970] 1 BLR 111
[120] Ali Haidar and Peter Barnes, *Delay and Disruption Claims in Construction* (2nd Edition, ICE Publishing, UK, 2014), page 60
[121] Jane Jenkins, *International Construction Arbitration Law* (2nd Edition, Kluwer Law International BV, The Netherlands, 2014), page 193
[122] *Inserco Ltd v Honeywell Control Systems Ltd* [1996] 21 BLISS 3
[123] *Wraight Ltd v PH & T (Holdings) Ltd* [1968] 8 BLR 22
[124] Ali Haidar and Peter Barnes, *Delay and Disruption Claims in Construction* (2nd Edition, ICE Publishing, UK, 2014), page 61

result of the prolongation; records must be kept to show the difference in labour/material prices between the actual and planned periods of work.[125]

FIDIC Sub-Clause 13.8 (Adjustments for Changes in Cost) allows for such price adjustments, provided that cost indices are specified in the Appendix to Tender. This clause is frequently disallowed in UAE contracts, with some exceptions (e.g. copper rates on power projects).

Increased costs for work under different climatic conditions due to delay

Loss/expense due to work in less favourable climatic conditions are recoverable in English law, as per ***Bush v Whitehaven* (1888)**.[126] The contractor needs to demonstrate that productivity was actually affected, not just that the work was undertaken during a period of less favourable climatic conditions.[127] This is a special case of disruption.

In FIDIC contracts, financial compensation for climatic Unforeseeable Physical Conditions is explicitly excluded (Sub-Clause 4.12). However, Sub-Clause 20.1 (Contractor's Claims) covers claims *'otherwise in connection with the Contract'* and could be called upon in reasonable disruption cases due to Employer's delay events.

Finance and interest charges

When a contractor incurs loss/expense, this has to be financed by him either from his own capital resources of by increased borrowing.[128] This is pure economic loss, similar to loss of profit, and may be claimed as 'special damages', subject to the remoteness test.

The case of ***FG Minter v Welsh Health Technical Services Organisation* (1980)**[129] confirmed that interest on borrowed money to cover contractor's loss/expense is recoverable under JCT contracts. In ***Rees & Kirby Ltd v Swansea CC* (1985)**,[130] the court assessed a

[125] Royal Institution of British Architects (RIBA), *Good Practice Guide: Assessing Loss and Expense* (RIBA Publishing, UK, 2013), page 46
[126] *Bush v Whitehaven* [1888] 52 JP 392
[127] Ali Haidar and Peter Barnes, *Delay and Disruption Claims in Construction* (2nd Edition, ICE Publishing, UK, 2014), page 61
[128] Ibid, page 57
[129] *F G Minter Ltd v Welsh Health Technical Services Organisation* [1980] 13 BLR 1, CA
[130] *Rees & Kirby Ltd v Swansea City Council* [1985] 30 BLR 1

similar claim on the basis of compound rather than simple interest. This was followed in Scotland in ***Ogilvie Builders v Glasgow City DC*** **(1994)**.[131]

In FIDIC contracts, finance and interest charges may be claimed *'otherwise in connection with the Contract'* under Sub-Clause 20.1 (Contractor's Claims), but *Laws* may interfere (Chapter 4).

Disruption and acceleration

Disruption arises from the unproductive use of contractor's labour and equipment due to disturbance or hindrance to the normal working methods, even without any delay. Forced or so-called 'constructive' acceleration (when contractor does not get the deserved EOT and is forced to accelerate) may invoke disruption.

There are several methods to quantify loss of productivity in a disruption claim. **The industry standard approach** (actual and standard/published productivity rates are compared) and **the measured mile approach** (actual and non-disrupted productivity rates are compared, within the same project) are frequently used. In ***Whittal Builders Company v Chester-Le-Street District Council*** **(1985),**[132] the court favoured the measured mile method, which is also recommended by SCL.[133] In ***John Doyle Construction v Laing Management (Scotland)*** **(2004),**[134] it was similarly acceptable to compare labour productivity actually achieved on site when work was largely free from disruption with disrupted productivity.

The principal problem is not so much in identifying the actual cost incurred, but in showing that, but for the disruptive event, the cost would have been less than actually turned out to be.[135] This is often extremely difficult to prove as contractor's own record of performance on a project is rarely perfect. Reasonable mitigation measures should also be considered.

FIDIC (and other) contract forms do not elaborate on disruption. The Contractor should warn about *'adverse circumstances'* (8.3, Programme), and may claim for loss *'otherwise in connection with the Contract'* (20.1, Contractor's Claims).

---

[131] *Ogilvie Builders Ltd v Glasgow City District Council* [1994] 68 BLR 122
[132] *Whittal Builders Company Ltd v Chester-Le-Street District Council* [1985] 11 CLR 40
[133] Society of Construction Law (SCL), *Delay and Disruption Protocol,* October 2002, reprinted October 2004, available at <http://www.scl.org.uk/resources> accessed 26-07-2014, para 1.19.7, page 32
[134] *John Doyle Construction Ltd v Laing Management (Scotland) Ltd* [2004] Scots CS 141
[135] Jane Jenkins, *International Construction Arbitration Law* (2nd Edition, Kluwer Law International BV, The Netherlands, 2014), page 194

Sub-contractor EOT claims

Sub-contractor's EOT claims may be relevant, provided that they can be attributed to delays caused by the employer only. Contractors are often reluctant to provide a break-up of sub-contractor's delay costs due to the actions of the contractor and the employer, and endeavour to recoup all of a sub-contractor's delay costs from the employer.[136]

Passing sub-contractor claims directly to the employer may be extremely difficult if the sub-contractor was required to carry out his work 'back-to-back' with the main contract. Such a claim would trigger analysis of sub-contract provisions, proof of payments to the sub-contractor and justification in the same manner required for the contractor's own claims.[137]

Relevance of sub-contractor's claims also depends on the applicable law (Chapter 4).

Claim preparation costs

Claim preparation is normally considered as part of project administration. Fees of external consultants are generally not recoverable under English law, except where the issue proceeds to arbitration/litigation, see ***James Longley v South West Thames*** **(1984)**.[138] Compensation might be sought where the request for further evidence involves unusually heavy amount of managerial time,[139] see ***Tate & Lyle v GLC*** **(1981)**.[140]

FIDIC forms similarly convey that normal contract administration is part of Contractor's obligations.

3.6 Claim submissions

EOT claims frequently suffer from poor presentation and substantiation.

The time-part of EOT claims should contain these essential elements:

- Project and contract details;

---

[136] Ali Haidar and Peter Barnes, *Delay and Disruption Claims in Construction* (2nd Edition, ICE Publishing, UK, 2014), page 57
[137] Ibid
[138] *James Longley v South West Thames* [1984] 25 BLR 56
[139] John Murdoch, Will Hughes, *Construction Contracts – Law and Management* (4th edition, Taylor & Francis, UK, 2008), page 234
[140] *Tate & Lyle Food and Distribution Co Ltd v GLC* [1981] 3 All ER 716

- Delay event(s) and responsibility allocation;
- Contractual entitlement (contract clauses, law);
- Contractual procedures (warnings, notices, submissions);
- Cause and effect analysis (narrative of planned and actual events);
- Delay analysis (using appropriate method(s));
- Statement of claim (conclusion, days claimed);
- Substantiation (contemporary records).

The cost-part of EOT claims should be notified and submitted separately (Chapter 2). Similarly to time claims, the contractor must show that cause of the delay is one that entitles the contractor, under the contract, to payment for the extra costs incurred. The factual evidence and the breakdown of costs must be clearly presented (Chapter 3).

3.7 Use of risk management for avoidance of EOT claims

Risk management may contribute to prevention of EOT claims. Practice guides, in general, recommend the following procedural steps:[141]

1) Risk Management Planning
2) Risk Identification
3) Qualitative Risk Analysis
4) Quantitative Risk Analysis (not always required)
5) Risk Response Planning
6) Risk Monitoring and Control

Elaboration of risk management steps is outside of this research, but a sample risk register is provided in **Appendix 6.4**; it may be adjusted to suit a particular project and included in monthly progress reports.

[141] Project Management Institute, *Practice Standard for Project Risk Management*, PMI, USA, 2009; and similar

4 Comparative analysis of legal issues relevant to EOT in FIDIC contracts under English and UAE laws

UAE civil law may influence the way courts and arbitrators interpret FIDIC EOT provisions. Relevant issues are discussed below by comparing the English law approach with the provisions from UAE legislation. Supporting court decisions and recommendations of professional organizations and legal practitioners are highlighted.

4.1 Construction and interpretation of contract terms

When the parties disagree about the particular clause, courts try to construe ('construct') the clause in order to give effect to it. English courts would try to assess objectively what the parties must be taken to have intended.[142] If the wording is ambiguous, the court may seek other evidence of intentions; in ***Robertson v Jackson* (1845),**[143] the phrase 'turn to deliver' the goods was constructed by referring to port procedures. Custom of the trade may be used to fill out the unclear contract provisions; in ***Hutton v Warren* (1836)**,[144] allowances for seeds and labour in the last year of the tenancy were incorporated into a lease agreement. Oral or other extrinsic evidence, if accepted, may be used to 'fill the gap' or 'rectify' the written document;[145] in ***Allen v Pink* (1838)**,[146] the court allowed evidence of an oral promise regarding the horse's behaviour in harness. However, such extrinsic (oral) evidence is admissible only to clarify, not to vary the contract ('parol evidence rule', parol stands for 'oral').[147]

English courts favour the 'purposive' or 'commercial' approach (contract wording is placed in context to be properly understood) as opposed to the 'literal' approach (wording has literal meaning subject only to the *contra proferentem* rule that any ambiguity would be interpreted

[142] Richard Stone, *The Modern Law of Contract* (9th Edition, Routledge, UK, 2011), page 192, para 6.5.2 Construction
[143] *Robertson v Jackson* [1845] 2 CB 412
[144] *Hutton v Warren* [1836] 150 ER 517
[145] Richard Stone, *The Modern Law of Contract* (9th Edition, Routledge, UK, 2911), page 316, para 9.7.2 Rectification
[146] *Allen v Pink* [1838] 4 M & W 140
[147] *Parol Evidence Rule*, see <http://legal-dictionary.thefreedictionary.com/document> accessed 02-01-2015

against its creator).[148] In ***Reardon Smith Line v Hansen-Tangen* (1976)**,[149] Lord Wilberforce referred to the need for the court to place itself in the same *'factual matrix'* to that of the parties when they made the contract. In ***Investors Compensation Scheme v West Bromwich Building Society* (1998),**[150] Lord Hoffmann favoured *'the common sense principles'* because '*the meaning which a document...would convey to a reasonable man is not the same thing as the meaning of its words.'*

UAE construction contracts must comply with the UAE Civil Code (Article 19(2)):

> *'The lex situs of the place in which real property is situated shall apply to contract made over such property.'*

Furthermore, *'a mandatory provision (of law) shall take precedence over a contractual stipulation'* (Article 31)*,* and *'ignorance of the law is no excuse'* (Article 29).

If the contract is clear, it will be interpreted under UAE law in accordance with its provisions; *'There shall be no scope for implications in the face of clear words.'* (Article 259).

It the wording is not clear, the UAE Civil Code provides guidance in Section 4, The Construction of Contracts (Articles 257-266). 'Construction' and 'interpretation' are used interchangeably. Generally, UAE law looks into 'the common intention of the parties', which is a more subjective test than that of a 'reasonable' or 'ordinary' man under English law.

While interpreting, a difference can be made between plain and ambiguous expressions in the contract.[151]

Plain expressions, if clearly stated and not in conflict with the law, are interpreted literally, unless *'it is impossible to give them their direct meaning'* (Article 258(2)). The **Dubai Court of Cassation Case 280/2008*[152]*** confirmed that *'where the wording of the contract is clear and obvious, there shall be no deviation from that clear wording to another.'* If the expression

---

[148] Ibid, page 194, para 6.5.3 'Purposive' or 'Commercial' Interpretation
[149] *Reardon Smith Line v Hansen-Tangen* [1976] 1 WLR 989
[150] *Investors Compensation Scheme Ltd v West Bromwich Building Society* [1998] 1 All ER 98
[151] Al Tamimi & Co, UAE, *Law Updates*, <http://www.tamimi.com>:
The interpretation of contracts under the UAE Civil Code, by by Abobakr Dafalla, January 2014, <http://www.tamimi.com/en/magazine/law-update/section-8/december-january-1/the-interpretation-of-contracts-under-the-uae-civil-code.html> accessed 05-08-2014
[152] Dubai Court of Cassation Case 280/2008

is plain but still does not reflect real intentions of the parties, the judge may search for its true meaning; the **Dubai Court of Cassation Case 280/2008**[153] clarified that what matters are *'intentions and meanings and not words and form'* (Article 258(1)).

Ambiguous expressions may have more than one meaning and are interpreted by looking at the *'mutual intentions of the parties...in accordance with the custom'* (Article 265(2)). The **Dubai Court of Cassation Case 125/2007**[154] confirmed that *'the contract's aim is defined by the true intentions and meanings of the parties'.* It is important to distinguish between evidence of context (allowed for interpreting an ambiguous contract) and extrinsic evidence (disallowed as an aid for changing a written contract,[155] see the **UAE Evidence Act (1992)**,[156] Article 36). This is similar to the 'parole evidence rule' in English law.

The UAE law approach is qualified by Article 266(1) stating that *'a doubt shall be interpreted in favour of the obligor'*, which allows uncertain obligations to be resolved in favour of the person required to perform the relevant obligation (especially if his bargaining power is inferior).[157] This is different than English 'contra proferentem' rule, where the ambiguous clause is interpreted against the party who put forward the wording.[158]

4.2 Good faith, ethical issues and role of the Engineer when assessing claims

In English contract law, there is no legal principle of good faith, for two reasons.[159] Firstly, parties are free to pursue their own goals in negotiating and performing contracts provided they are not in breach of contract. Secondly, there is concern that concept of good faith is too

---

[153] Dubai Court of Cassation Case 294/2008
[154] Dubai Court of Cassation Case 125/2007
[155] Al Tamimi & Co, UAE, *Law Updates*, <http://www.tamimi.com>:
The interpretation of contracts under the UAE Civil Code, by by Abobakr Dafalla, January 2014, <http://www.tamimi.com/en/magazine/law-update/section-8/december-january-1/the-interpretation-of-contracts-under-the-uae-civil-code.html> accessed 05-08-2014
[156] UAE Federal Law of Evidence No. 10 of 1992 ('UAE Evidence Act'), amended by Law No. 36 of 2006 (Electronic Transactions)
[157] International Comparative Legal Guides (ICGL), *United Arab Emirates – Construction & Engineering Law 2014*, by Adam Balchin and Euan Lloyd, Al Tamimi & Company, 2014, available at <http://www.iclg.co.uk/practice-areas/construction-and-engineering-law/construction-and-engineering-law-2014/united-arab-emirates> accessed 09-08-2014, para 3.16
[158] Al Tamimi & Co, UAE, *Law Updates*, <http://www.tamimi.com>:
The interpretation of contracts under the UAE Civil Code, by by Abobakr Dafalla, January 2014, <http://www.tamimi.com/en/magazine/law-update/section-8/december-january-1/the-interpretation-of-contracts-under-the-uae-civil-code.html> accessed 05-08-2014
[159] Fenwick Elliott LLP, London, *Contract Papers* <http://www.fenwickelliott.com>:
Can you imply good faith into agreements made under English Law, by Jeremy Glover, Issue 05, March 2013, <http://www.fenwickelliott.com/files/jeremy_glover_-_issue_05_-_iq_2013_-_good_faith.indd_.pdf> accessed 15-08-2014

vague and subjective and therefore uncertain. Nevertheless, recently in ***Yam Seng v International Trade Corporation*** **(2013),**[160] the judge supported 'fair dealing' and 'reasonable standard of conduct' in a distributorship agreement and implied duty of honesty in the provision of information and approval of fair retail prices. The judge stressed, however, that such approach depends on the context; in the construction context, he mentioned an example of consents and decisions that should not be withheld unreasonably.

In contrast, the UAE Civil Code implies that Sharia principles of 'good faith' and 'fairness' must be followed in exercising rights and powers (Article 246(1)):

> *'The contract must be performed in accordance with its contents, and in a manner consistent with the requirements of good faith'.*

Each party is required to discharge its contractual obligations with *'all such care as the reasonable man would exercise'* (Article 383).

A failure to act in good faith would therefore be a breach of contract.[161]

The Civil Code further clarifies (Article 106):

> *'A person shall be held liable for an unlawful exercise of his rights,...(a) intentional infringement (of another's rights);....(b) contrary to Islamic Sharia, the law, public order, or morals;....(c) if the interests desired are disproportionate to the harm that will be suffered by others;....(d) if it exceeds the bounds of usage and custom'.*

These provisions in UAE law are sometimes relied upon by Contractors when making allegations of unlawful acts (or inaction) by Engineers/Employers.[162]

The FIDIC Engineer must follow a fair approach when evaluating claims. In FIDIC-1987, the Engineer was expressly impartial (Sub-Clause 3.1). In FIDIC-1999, he works for the

---

[160] *Yam Seng Pte Ltd (a company registered in Singapore) v International Trade Corporation Ltd* [2013] EWHC 111 (QB)

[161] Raid Abu-Manneh, *Contracting in the Middle East* (Construction & Engineering Legal Update, Issue 57 December 2008, published by Mayer Brown), <http://www.mayerbrown.com/publications/Construction-amp-Engineering-Legal-Update-12-18-2008/> accessed 25-04-2014

[162] Al Tamimi & Co, UAE, *Law Updates*, <http://www.tamimi.com>:
Dealing with concurrency in construction delay claims, by Dean O'Leary, April 2014, <http://www.tamimi.com/en/magazine/law-update/section-8/april-7/dealing-with-concurrency-in-construction-delay-claims.html> accessed 05-08-2014

Employer (1.1.2.4, 3.1), but *'shall consult with each Party in an endeavour to reach agreement'* and, if agreement is not achieved, *'shall make a fair determination...taking due regard of all relevant circumstances'* (Sub-Clause 3.5). The **FIDIC Contracts Guide**[163][164] suggests an amendment that '*the Engineer shall act impartially when making these determinations*'. Even if the Engineer is a Government employee, he should still be impartial.[165] FIDIC does not allow the Engineer to delegate his authority to determine any matter, unless specifically agreed by the Parties (Sub-Clause 3.2).

The Engineer's decision is binding, subject to the notice of dissatisfaction (Sub-Clause 20.4), and this is enforced in arbitrations. In the **ICC Case 7910 (1996)**,[166] the Contractor obtained Engineer's decision; in the absence of dissatisfaction notice, the tribunal lacked jurisdiction. In the **ICC Case 3790 (1983)**,[167] the tribunal confirmed the final/binding Engineer's decision.[168]

Regardless of jurisdiction, the Engineer may be liable for his wrong decisions. In ***John Mowlem v Eagle Star Insurance* (1992),**[169] the architect was liable in tort under English law for wrongful interference with the contract. In Dubai's ***Pacific Associates v Baxter* (1988),**[170] Engineer's unfair claim assessments under a FIDIC dredging contract could be challenged by the Contractor, but only by claiming against the Employer.

---

[163] FIDIC, *The FIDIC Contracts Guide – 1999 Conditions for Construction, Plant & DB and EPC/T* (1st Edition, 2000; Amended 2006)
[164] Michael D Robinson, *An Employer's and Engineer's Guide to the FIDIC Conditions of Contract* (Wiley-Blackwell, UK, 2013), page 79
[165] Christopher Seppala, *Contractor's claims under the FIDIC civil engineering contract, Fourth (1987) Edition* (International Business Law Journal, 1991), page 20 referring to J. B. Wikeley, *Municipal Engineering Law and Administration* (C.R. Books Ltd, London 1964, at 29)
[166] ICC Case No. 7910 (1996)
[167] ICC Case No. 3790 (1983)
[168] Christopher Seppala, *International construction contract disputes: commentary on ICC awards dealing with the FIDIC International Conditions of Contract* (The International Court of Arbitration, Bulletin Vol. 9 No 2, November 1998), pages 36-37, topic D
[169] *John Mowlem & Co plc v Eagle Star Insurance Co Ltd* [1992] 62 BLR 126
[170] *Pacific Associates Inc and Another v Baxter and Other* [1988] 44 BLR 33

4.3 Delay notices and warnings as condition precedent

English courts generally view that timescales in construction contracts are directory rather than mandatory. The contractor should not lose his right to claim if such claim is not brought within the stipulated timescale,[171] see ***Temloc v Errill Properties (1987).***[172]

The case of ***Bremer Handelgesellschaft* v *Vanden Avenne Izegem (1978)***[173] defined that a notice provision should be construed as a condition precedent if: (1) it states the precise time for serving the notice, and (2) it makes plain by express language that unless the notice is served within that time the claimant will lose his rights.

FIDIC Sub-Clause 20.1 (Contractor's Claims) fulfils both these conditions, and was clearly drafted as a condition precedent:[174]

> *"The notice shall be given as soon as practicable, and not later than 28d after the Contractor became aware, or should have become aware, of the event or circumstance. If the Contractor fails to give notice...the Time for Completion shall not be extended, the Contractor shall not be entitled to additional payment.'*

Sub-Clause 8.3 (Programme) further requires the Contractor to issue 'prompt' warnings to the Engineer of *'probable future events or circumstances which may adversely affect the work.'* These are not regarded as condition precedent as they cover virtually anything.[175]

The 'prevention principle' (one should not benefit from his own wrongs) may interfere, if the employer has prevented the contractor. In the Australian ***Gaymark Investments v Walter Construction Group* (1999)**,[176] the prevention principle took precedence over the notification provisions; the contractor was not deprived of his right to claim in spite of a failure

---

[171] Fenwick Elliott LLP, London, Contract Papers <http://www.fenwickelliott.com>: *FIDIC: An overview of the latest developments, comparisons, claims and force majeure,* by Jeremy Glover, 2007, <http://www.fenwickelliott.com/files/Arbitration%207%20-%20FIDIC%20an%20overview.pdf> accessed 15-08-2014, page 17

[172] *Temloc Ltd* v *Errill Properties Ltd* [1987] 39 BLR 34

[173] *Bremer Handelgesellschaft mbH* v *Vanden Avenne Izegem nv* [1978] 2 Lloyd's Rep. 113, per Lord Salmon

[174] Fenwick Elliott LLP, London, Contract Papers <http://www.fenwickelliott.com>: *FIDIC: An overview of the latest developments, comparisons, claims and force majeure,* by Jeremy Glover, 2007, <http://www.fenwickelliott.com/files/Arbitration%207%20-%20FIDIC%20an%20overview.pdf> accessed 15-08-2014, page 17

[175] Brian Barr and Leo Grutters (originally by Brian Totterdill), *FIDIC Users' Guide* (ICE Publishing, UK, 2014), page 171

[176] *Gaymark Investments Pty Ltd* v *Walter Construction Group Ltd* [1999] 18 BCL 449

to notify. This judgment provoked a debate, and ***Gaymark*** was finally rejected in England in ***Multiplex Construction v Honeywell Control Systems (2007*)**,[177] where Mr Justice Jackson explained that notice of delay serves a useful purpose:

> *"Such notice enables matters to be investigated while they are still current.'* It *'gives the employer the opportunity to withdraw instructions when the financial consequences become apparent."*

This judgment was confirmed in ***Steria v Sigma Wireless Communications*** **(2008)**,[178] with further clarification that *'minutes of meeting prepared by third parties...did not constitute adequate notice'*. In Scotland, ***John Haley v Dumfries & Galloway RC*** **(1988)**[179] also held that minutes will not constitute good notice unless the parties specifically amend the contract.

FIDIC time-bar provisions are therefore valid under English law, but their operation under UAE law might be different.

The **UAE Commercial Code**[180] states that contract provisions prevail over the commercial/civil codes (Article 2), but subject to mandatory law provisions (Civil Code, Article 31). Mandatory law provisions do not allow contractual rights to expire easily; for commercial claims such time bar is 10 years (Commercial Code, Article 95):

> *'The obligations of traders towards each other and concerning their commercial activities, shall not be hard...on the lapse of ten years from the date on which the performance of the obligation falls due, unless the law stipulates a shorter period'.*

This precedes any contractual time bars (Civil Code, Article 486(1)):

> *'It shall not be permissible to waive a time-bar defence prior to the establishment of the right to raise such defence, nor shall it be permissible to agree that a claim may not be brought after a period differing from the period laid down by law'.*

Provisions of 'good faith' and 'unlawful exercise of a right' (Articles 246, 106) may also apply. Rejection of a valid claim by the Engineer/Employer due to a late notice or improper format of

---

[177] *Multiplex Construction* v *Honeywell Control Systems* [2007] EWHC 447 (TCC)
[178] *Steria Ltd v Sigma Wireless Communications Ltd* [2008] 118 Con LR 177
[179] *John L Haley Ltd v Dumfries & Galloway Regional Council* [1988] 39 GWD 1599
[180] UAE Commercial Transactions Law No. 18 of 1993 (‘Commercial Transactions Law’, 'Commercial Code')

notice (e.g. minutes of meeting) may be seen as an act of bad faith, causing disproportionate harm to the Contractor. A straightforward rejection of a large financial claim on the grounds of procedural technicalities may also be an 'unjust enrichment'[181] (Articles 318-319).

From the other perspective, FIDIC expressions are clearly drafted and contracts should be interpreted in accordance with their terms (Chapter 4.1), so the Contractor should comply with mandatory time bars. Contractor's failure to notify could equally be seen as an act of bad faith, depriving the Employer of any chance to apply corrective measures. The actual circumstances should be examined and may play an important role.

Abu Dhabi Municipality decided to keep the original Sub-Clause 20.1 in their modified FIDIC contract,[182] but there are no published experiences about its enforcement in practice.

Claim notices provoke polarising opinions. In the FIDIC-based **ICC Case 15282 (2010)**,[183] the Contractor failed to comply with the notification time limit. Rather than dismissing the claim outright, which should have been done according to commentators,[184] the tribunal took a pragmatic approach and examined the Contractor's documentary evidence to determine whether this was sufficient, and rejected the claim on that basis and not on notice provisions.

Claim notice as a condition precedent might not always be enforceable under UAE law as per the views published by the **UAE Society of Engineers**.[185] As time bars are a regular contentious issue in the UAE,[186] it seems reasonable to recommend that EOT claim should be initially reviewed based on its merits and actual circumstances, rather than immediately rejected for non-compliance with the notice provisions alone. It might even be prudent and reasonable to consider relaxing time bar provisions, where appropriate. In any case,

---

[181] Claire King, *English Law v the UAE Civil Code,* Fenwick Elliott, International Quarterly, Issue 12, 2014, <http://www.fenwickelliott.com/files/issue_12_-_iq_2014.pdf> accessed 14-02-2015

[182] Abu Dhabi Conditions of Contract, Decree of the Head of Executive Council, Decision No 1 of 2007 (Based on modified FIDIC Red and Yellow Books under special FIDIC license issued to Abu Dhabi Municipality)

[183] ICC Case No. 15282 (2010), published in the ICC Court of Arbitration Bulletin Vol 24/No 2 -2013, pp 53-54

[184] Christopher Seppala, *International construction contract disputes: Fourth commentary on ICC awards dealing with the FIDIC International Conditions of Contract*, The International Court of Arbitration, Bulletin Vol. 24 No 2, 2013, page 54

[185] UAE Society of Engineers, *The legal effect of condition precedent described in Clause 20(1) of FIDIC 1999 in the context of England and UAE Courts*, by Mahmoud Bader, <http://www.uaesocietyofengineers.com/magazineCurrentIssuemore.aspx?id=112> accessed 30-07-2014

[186] International Comparative Legal Guides (ICGL), *United Arab Emirates – Construction & Engineering Law 2014*, by Adam Balchin and Euan Lloyd, Al Tamimi & Company, 2014, available at <http://www.iclg.co.uk/practice-areas/construction-and-engineering-law/construction-and-engineering-law-2014/united-arab-emirates> accessed 09-08-2014, para 3.6

Contractor's non-compliances with the contract provisions should be taken into account in claim assessments.

4.4 Significance of contemporary records

Under English law, claim records were defined by Judge Sanders in the FIDIC-1987 case, ***Attorney General for the Falklands Islands* v *Gordon Forbes Construction (Falklands)* (2003)** as:[187]

> *"original or primary documents, or copies thereof, produced or prepared at or about the time giving rise to a claim, whether by or for the contractor or the employer."*

Contemporary records arise at (or very close to) the time of the claim.[188] Judge Sanders held that it was not possible to avoid the contractual requirement of contemporary records by simply producing witness statements after the event, and rejected the claim.

In the FIDIC-1987 **ICC Case 15282 (2010),**[189] in spite of the improper claim notification, the tribunal examined the claim and referred to the definition of 'contemporary records' in the *Falklands* case. The Claimant failed to present 'contemporary records' to support its claim and the tribunal rejected the claim on that basis.[190]

However, FIDIC-1999 Sub-Clause 20.1 is somehow different:

> The Contractor *'shall keep such contemporary records as may be necessary to substantiate any claim'* and the Engineer may *'monitor the record-keeping and/or instruct the Contractor to keep further contemporary records'*.

---

[187] *Attorney General for the Falklands Islands* v *Gordon Forbes Construction (Falklands) Limited* [2003] 6 BLR 280

[188] Nicholas Gould, *United Kingdom: Making a claim under the FIDIC form of contract. What Is Clause 20 all about?*, sponsored by Fenwick Elliott, 2007, <http://www.mondaq.com/x/54934/Building+Construction/Making+A+Claim+Under+The+FIDIC+Form+Of+Contract+What+Is+Clause+20+All+About> accessed 01-08-2014

[189] ICC Case No. 15282 (2010), published in the ICC Court of Arbitration Bulletin Vol 24/No 2 -2013, pp 53-54

[190] Christopher Seppala, *International construction contract disputes: Fourth commentary on ICC awards dealing with the FIDIC International Conditions of Contract*, The International Court of Arbitration, Bulletin Vol. 24 No 2, 2013, page 54

This wording was discussed in the Trinidad/Tobago case of ***National Insurance Property Development v NH International (Caribbean)*** **(2009).**[191] It was held that FIDIC-1999 (unlike the *Falklands* case) does not specifically require a verification of the claim by contemporary records; it only requires the Contractor to keep and have available these records. A failure to keep records does not prevent recovery on the claim but is to be taken into account in its assessment insofar as it may have prejudiced or prevented a proper investigation of the claim. The claim without contemporary records does not automatically fail under English law**.**

In the UAE, where 'good faith' is enforceable, immediate claim rejections for procedural technicalities alone are not generally recommended (Chapters 4.2-4.3). Furthermore, witness evidence is important and may be more compelling than in common law jurisdictions.[192] However, these differences do not negate the importance of maintaining contemporary records; proper site diaries and progress reports remain essential for documenting delay and disruption claims.[193]

FIDIC requirements in regard to contemporary records are clear and should be followed by contractors. Failure to keep proper records should be taken into account in claim assessments; in the **Dubai Court of Cassation Case (213/2008),**[194] the EOT was approved by the court, but without costs due to the contractor's failure to demonstrate clear causation and provide valid evidence of actual idle resources and administrative costs associated with delays (see also the discussion on 'global claims' below).

The **UAE Evidence Act**[195] further explains the evidence procedures and admissible types of evidence. The **Law No. 36 (2006)** amends the Act to allow electronic documents and

---

[191] *National Insurance Property Development Co Ltd v NH International (Caribbean) Ltd,* High Court of Trinidad and Tobago, 21 October 2009 (Claim No CV2008-04881)

[192] Essam Al Tamimi, *Practical Guide to Litigation and Arbitration in the United Arab Emirates* (Kluwer Law International, UK, 2003)

[193] Sachin Kerur, Pinsent Masons Gulf Region, *Record what happened, when it happened – the importance of 'contemporary records',* and related response from Roger Gibson, see *<http://kluwerconstructionblog.com/2010/06/08/record-what-happened-when-it-happened-%E2%80%93-the-importance-of-contemporary-records/>* accessed 07-01-2015

[194] Dubai Court of Cassation (213/2008) Commercial Appeal (19 January 2009)

[195] UAE Federal Law of Evidence No. 10 of 1992 ('UAE Evidence Act'), amended by Law No. 36 of 2006 ('Electronic Transactions')

signatures to serve as court evidence. **Abu Dhabi Court of Cassation (2010)**[196] held that electronic communications, including offer-acceptance, must be given the same evidentiary weight as physical communications. Emails are valid evidence once it is proven that the email has been received from the sender. This broadens the contemporary records and stresses on the importance of electronic document management systems (Chapter 3.2).

4.5 Approach to resolving concurrent delays

The **SCL Protocol** offers the following definition:[197]

> *'True concurrent delay is the occurrence of two or more delay events at the same time, one an Employer Risk Event, the other a Contractor Risk Event, and the effects of which are felt at the same time. True concurrent delay will be a rare occurrence.'*

However, in ***Adyard Abu Dhabi v SD Marine Services* (2011),**[198] Hamblen J did not follow the SCL Protocol and accepted the definition of concurrent delay as:

> *'a period of project overrun which is caused by two or more effective causes of delay which are of approximately equal causative potency.'*

This definition assumes that events: 1) occur simultaneously; 2) are effective causes of delay; 3) are of equal contributory strength. If the events are not equal in effect, one will be treated as the effective and the other will be ignored.[199]

Cases where delay effects occurred concurrently, but from the sequential events, are also classed as 'concurrent'.[200]

Court decisions on concurrent delays under English law are inconsistent and several approaches have been considered.[201][202]

---

[196] Abu Dhabi Court of Cassation Case (2010), Decision on Using Electronic Communications as Evidence, see Tamimi Law Update at < http://www.tamimi.com/en/magazine/law-update/section-6/october-2/electronic-evidence-in-the-uae-courts.html> and <http://www.ehow.com/about_6663794_uae-federal-law-evidence.html> both accessed 16-03-2015

[197] Society of Construction Law (SCL), *Delay and Disruption Protocol,* October 2002, reprinted October 2004, available at <http://www.scl.org.uk/resources> accessed 26-07-2014, para 1.4.4, page 16

[198] *Adyard Abu Dhabi v SD Marine Service*s [2011] EWHC 848

[199] John Marrin QC, *Concurrent Delay Revised*' (179 SCL, February 2013), a paper presented to the Society of Construction Law at a meeting in London on 4 December 2012

[200] Kennedys, *Concurrency in delay claims,* <http://www.cila.co.uk/files/Construction/Kennedys/Concurrency%20Talk.pdf> accessed 09-01-2015

The Malmaison approach[203] was originated by Judge Dyson in ***Henry Boot Construction v Malmaison Hotel (Manchester)*** **(1999)**[204], and was accepted by both parties:

> *'If there are two concurrent causes of delay, one of which is a relevant event, and the other is not, then the contractor is entitled to an EOT...notwithstanding the concurrent effect of the other event'.*

Under this approach, widely accepted in the industry, the contractor is given an EOT caused by the employer's event even if the contractor himself was responsible for another parallel delay event.

The SCL Protocol similarly recommends that *'Contractor's concurrent delay should not reduce any EOT due.*[205] This applies equally to '*true concurrent delays*'[206] and where events *'occur sequentially but have concurrent effects*.'[207]

The dominant cause approach was introduced by Keating (1995)[208] in the absence of relevant law:[209]

> *'If there are two causes, one the contractual responsibility of the defendant and the other...of the plaintiff, the plaintiff succeeds if he establishes that the cause for which the defendant is responsible is the effective, dominant cause.'*

Which cause is dominant is not resolved by the mere point of order in time, but it is to be decided by applying common sense standards and logical principles of causation. It is sometimes referred to as the **'common sense approach'**.[210]

---

[201] Roger Knowles, *200 Contractual Problems and their Solutions* (3rd edition, Willey-Blackwell, UK, 2012), pp 93-100
[202] Ali Haidar and Peter Barnes, *Delay and Disruption Claims in Construction* (2nd Edition, ICE Publishing, UK, 2014), page 42
[203] Ibid, page 39
[204] *Henry Boot Construction (UK) Ltd v Malmaison Hotel (Manchester) Ltd* [1999] 70 Con LR 32
[205] Society of Construction Law (SCL), *Delay and Disruption Protocol,* October 2002, reprinted October 2004, available at <http://www.scl.org.uk/resources> accessed 26-07-2014, para 1.4.1, page 15
[206] Ibid, para 1.4.5, page 16
[207] Ibid, para 1.4.7, page 16
[208] Donald Keating, Anthony May, *Keating on Building Contracts* (6th edition, Sweet & Maxwell, 1995), para 8.015-8.018
[209] Roger Knowles, *200 Contractual Problems and their Solutions* (3rd edition, Willey-Blackwell, UK, 2012), p 95
[210] Ali Haidar and Peter Barnes, *Delay and Disruption Claims in Construction* (2nd Edition, ICE Publishing, UK, 2014), page 43

However, common sense was not sufficient in ***H Fairweather v London Borough of Wandsworth*** **(1987).**[211] The judge disagreed with the arbitrator's decision that the EOT should relate to the dominant cause and requested that each separate cause of delay should be assessed individually. The common sense approach may not suffice on projects that have sustained multiple overlapping changes or delays of long duration.[212]

The apportionment approach might apply in the absence of an identifiable dominant cause. The competing concurrent causes were considered in the Scottish case of ***City Inn v Shepherd's Construction*** **(2010),**[213] with the following conclusions:

- if a dominant cause can be identified, *'effect will be given to that, but by leaving out of account any cause or causes which are not material'*;

- where there are two causes, neither of which is dominant, and only one is the employer's delay event, *'the claim for EOT will not necessarily fail...it will be open to the decision maker...to apportion the delay.'*

The apportionment was appropriate in ***John Doyle v Laing Management (Scotland)*** **(2004)**,[214] where the dominant cause could not be applied.

The apportionment approach has been criticized as being '*contrary to the principles within the SCL Protocol*'[215]. In ***Walter Lilly v MacKay*** **(2012)**[216] the judge decided that 'apportionment approach' was not applicable in England and the ***Malmaison*** case was followed; if there are two concurrent delay events, the contractor is entitled to an EOT and there is no legal basis in England to apportion delay. Furthermore, there is no difference in approach between simultaneous and sequential delays (similar to SCL).[217][218]

---

[211] *H Fairweather and Co Ltd v London Borough of Wandsworth* [1987] 39 BLR 106
[212] Ali Haidar and Peter Barnes, *Delay and Disruption Claims in Construction* (2nd Edition, ICE Publishing, UK, 2014), page 43
[213] *City Inn Ltd* v *Shepherd's Construction* [2007] CSIH 68
[214] *John Doyle Ltd v Laing Management (Scotland) Ltd* [2004] BLR 295
[215] see Galadari Advocates & Legal Consultants, Dubai, available at <www.galadarilaw.com/userfiles/files/EOTsandLADs-April%202012.pdf> accessed 10-01-2015
[216] *Walter Lilly and Company v MacKay* [2012] BLR 503
[217] Winter J., '*How Should Delay be Analysed – Dominant Cause and its Relevance to Concurrent Delay',* SCL Paper 153, January 2009, p.16
[218] Society of Construction Law (SCL), *Delay and Disruption Protocol,* October 2002, reprinted October 2004, available at <http://www.scl.org.uk/resources> accessed 26-07-2014, para 1.4.5 and 1.4.7, page 16

There are other simplistic approaches, such as the **'first past the post' approach**,[219] where the cause of delay which occurs first will be used for EOT, and **'but for' approach**,[220][221] where one party seeks to lay responsibility for delay on the other party by arguing that the delay would not have occurred 'but for' certain actions. These are less relevant.

As for the **monetary aspect of concurrent delay**, Pickavance[222] and Knowles[223] recommend that an EOT should be awarded to the contractor where the employer's and contractor's delay events are concurrent, but **without monetary compensation**. The SCL Protocol similarly states:[224]

> *'Contractor may not recover compensation...unless it can separate the loss/expense that flows from the Employer Risk Event from that which flows from the Contractor Risk Event.*
>
> *'Contractor will be entitled to compensation only for any period by which the Employer Delay exceeds the duration of the Contractor Delay.'*

FIDIC contracts are silent on concurrent delays and disputes are decided on a case-by-case basis.

The FIDIC-based **ICC Case 10847 (2003)**[225] denied a time extension due to delayed drawings, given the Contractor's concurrent delay in excavation, because drawings were not on a critical path. Opinions are divided on this decision as it differs from SCL recommendations.[226]

---

[219] Roger Knowles, *200 Contractual Problems and their Solutions* (3rd edition, Willey-Blackwell, UK, 2012), p 97
[220] Ibid, p 99
[221] Ali Haidar and Peter Barnes, *Delay and Disruption Claims in Construction* (2nd Edition, ICE Publishing, UK, 2014), page 43
[222] Keith Pickavance, *Delay and Disruption in Construction Contracts* (3rd Edition, LLP Professional Publishing, London-Singapore, 2005), p 352
[223] Roger Knowles, *200 Contractual Problems and their Solutions* (3rd edition, Willey-Blackwell, UK, 2012), p 97
[224] Society of Construction Law (SCL), *Delay and Disruption Protocol,* October 2002, reprinted October 2004, available at <http://www.scl.org.uk/resources> accessed 26-07-2014, para 1.10.4, page 23
[225] ICC Case No. 10847 (2003), published in the ICC Court of Arbitration Bulletin Vol 23/No 2 -2012, page 35
[226] Christopher Seppala, *International construction contract disputes: Fourth commentary on ICC awards dealing with the FIDIC International Conditions of Contract*, The International Court of Arbitration, Bulletin Vol. 23 No 2, 2012, page 35

In another FIDIC-based **ICC Case 12654 (2005)**,[227] the tribunal concluded that part of the delay in giving possession of the site was due to the Employer and awarded the Contractor part of its claimed costs; the Contractor was able to demonstrate entitlement to some compensation.

The UAE Civil Code provisions of 'good faith' (Article 246(1)) and 'unlawful exercise of right' (Article 106) impose an obligation on the Engineer to take a fair account of Employer's concurrent delays.

Furthermore, a judge (or tribunal) may consider responsibility of each party when assessing compensation for delay (Article 290):

> *'It shall be permissible for the judge to reduce the level by which an act has to be made good or to order that it need not be made good if the person suffering harm participated by his own act in bringing about or aggravating the damage',*

or may even 'apportion' liability for concurrent delay (Article 291):

> *'If a number of persons are responsible for a harmful act, each of them shall be liable in proportion to his share in it, and the judge may make an order against them in equal shares or by way of joint or several liability.'*

Under the Civil Code, a contractor is liable for the consequences of his *'wrongful act or default'*, but he is not liable for the occurrence of events that he is not responsible for (Article 878).

In the **Dubai Court of Cassation Case 266/2008**,[228] the employer claimed for delay in construction and defects and the contractor made a counter claim for prolongation costs. The court expert found that a nominated sub-contractor, not under the main contractor's control, was a dominant cause, and awarded an EOT.

In another **Dubai Court of Cassation Case 1/2006**,[229] the contractor was not expeditious, but the employer also delayed the commencement, instructed additional works and changed

---

[227] ICC Case No. 12654 (2005), published in the ICC Court of Arbitration Bulletin Vol 23/No 2 -2012, page 38
[228] Dubai Court of Cassation Case 266/2008 (17 March 2009)
[229] Dubai Court of Cassation Case 1/2006 (16 April 2006)

the use from residential to serviced apartments. The court granted an EOT because employer delays were dominant.

UAE court judgments suggest that contractor is entitled to an EOT for a relevant cause of delay in which he played no part, despite the contractor himself being in concurrent delay; the prospective time analysis method and the dominant cause approach seem acceptable.[230] If the Contractor was in concurrent delay, then UAE law will likely protect an employer from contractor's claims for prolongation costs, reflecting the English position.[231]

The background of a court expert (or arbitrator) and the wording of a contract may contribute to a concurrency scenario. If the contract provides that contractor is not entitled to relief for concurrent delay, a court may give effect to this drafting;[232] contracts should be interpreted in accordance with their terms (Chapter 4.1).

As a matter of clarification, a FIDIC contract may be amended to state that contractor will receive an EOT for true concurrent delay, but without costs; no party should benefit from its own mistakes.

4.6 Ownership of float in the programme

The **SCL Protocol** suggests that float is available to both the employer and the contractor (actually, to the project), and EOT should be granted only if there is no remaining float:[233]

> *'where there is remaining float in the programme...an EOT should only be granted to the extent that the Employer Delay is predicted to reduce to below zero the total float.'*

The SCL approach was followed in ***Ascon Contracting v McAlpine Construction* (1999)**.[234] McAlpine was the main contractor and Ascon was the structural works sub-

[230] Abdurrahman Yousef Rahhal, *Entitlement to Extension of Time in cases of Concurrent Delays under the UAE Law*, MSc Dissertation, Faculty of Construction Law and Dispute Resolution, The British University of Dubai, UAE, June 2013, see the summary of court cases and conclusions on pages 47-49

[231] Al Tamimi & Co, UAE, *Law Updates*, <http://www.tamimi.com>: *Dealing with concurrency in construction delay claims,* by Dean O'Leary, April 2014, <http://www.tamimi.com/en/magazine/law-update/section-8/april-7/dealing-with-concurrency-in-construction-delay-claims.html> accessed 05-08-2014

[232] International Comparative Legal Guides (ICGL), *United Arab Emirates – Construction & Engineering Law 2014*, by Adam Balchin and Euan Lloyd, Al Tamimi & Company, 2014, available at <http://www.iclg.co.uk/practice-areas/construction-and-engineering-law/construction-and-engineering-law-2014/united-arab-emirates> accessed 09-08-2014, para 3.4

[233] Society of Construction Law (SCL), *Delay and Disruption Protocol,* October 2002, reprinted October 2004, available at <http://www.scl.org.uk/resources> accessed 26-07-2014, para 1.3.1, page 13

contractor. The project was delayed by 9w, and McAlpine argued that 5w float was for their own delays. The judge rejected this and favoured the 'first come, first served' approach. In ***Royal Brompton Hospital v Hammond* (2002)**,[235] Judge Lloyd similarly held that the project owns the float, but recognised the potential unfairness to contractors in the event of a delay caused by the employer taking place before one caused by the contractor.

The 'first come, first served' approach is not universally accepted. Thomas[236] believes that *'any float in the contractor's programme is for the benefit of the contractor.'* Pickavance[237] discusses the American approach from ***Natken v George Fuller* (1972)**,[238] where neither total nor free floats should be used for employer's changes. Knowles[239] also suggests that float is for correcting contractor's own mistakes, although he acknowledges this is in contrast with SCL recommendations and English court decisions.

FIDIC does not expressly define the ownership of float. Corbett and Richards[240] suggest that wording of the FIDIC suite shifts the float ownership towards the Contractor, but this is not widely accepted or evidenced in arbitral awards.

In the UAE, there is no particular guidance on float ownership and legal authors refrain from taking positions.[241] The contractor, the employer, or the project may own the float.[242]

Realistically, the float should be for the benefit of the contractor. However, in standard EOT calculations (Chapter 3.4) floats are usually consumed by delay events as they occur. To prevent this, the contractor may extract floats into 'contingency activities', which is a

---

[234] *Ascon Contracting Ltd v McAlpine Construction* [1999] 43 BLISS 5
[235] *Royal Brompton Hospital National Health Trust v Hammond etc* [2002] BLR 255, [2002] All ER 801
[236] Reg Thomas, *Construction Contract Claims* (2nd Edition, Palgrave, UK, 2001), page 101
[237] Keith Pickavance, *Delay and Disruption in Construction Contracts* (3rd Edition, LLP Professional Publishing, London-Singapore, 2005), page 335
[238] *Natken & Co v George A Fuller & Co* 347 F. Supp. 17 (W.D. Mo. 1972)
[239] Roger Knowles, *200 Contractual Problems and their Solutions* (3rd edition, Willey-Blackwell, UK, 2012), para 5.3 Who owns float time in the contractor's programme, page 88 Summary
[240] Cornerstone Seminars, *FIDIC Claims - Managing, Defending and Making Claims under FIDIC Contracts*, Proceedings from a two-day specialized FIDIC workshop led by Edward Corbett and David Richards, Abu Dhabi, UAE, 24-25 May 2011, commented by David Richards during the seminar workshops
[241] Al Tamimi & Co, UAE, *Law Updates*, <http://www.tamimi.com>: *Dealing with concurrency in construction delay claims,* by Dean O'Leary, April 2014, <http://www.tamimi.com/en/magazine/law-update/section-8/april-7/dealing-with-concurrency-in-construction-delay-claims.html> accessed 05-08-2014, see footnote No. 2
[242] International Comparative Legal Guides (ICGL), *United Arab Emirates – Construction & Engineering Law 2014*, by Adam Balchin and Euan Lloyd, Al Tamimi & Company, 2014, available at <http://www.iclg.co.uk/practice-areas/construction-and-engineering-law/construction-and-engineering-law-2014/united-arab-emirates> accessed 09-08-2014, para 3.5

preferred approach, or preventively extend contractor's activities to avoid excessive floats that invite for disputes.

4.7 Sub-contractor EOT claims

A sub-contractor would generally submit EOT claims to a main contractor, but an employer may get involved.

Contract forms (including FIDIC) require the contractor to produce a programme, but there is no express obligation to follow it strictly (Chapter 2.3). Similarly, a sub-contractor is generally not required to strictly follow a main contractor's programme. In ***Pigott Foundations v Shepherd Construction* (1994)**,[243] it was decided that piling sub-contractor should complete the JCT sub-contract reasonably in accordance with the progress of works, and not strictly in accordance with the main contractor's programme.

An express obligation for a sub-contractor to follow a main contractor's programme can be a 'two-edged sword'.[244] In ***Kitson Sheet Metal v Matthew Hall M&E Engineers* (1989),**[245] the sub-contractors (Kitsons) were unable to recover EOT claims due to main programme delays, because the main contractor (Matthew Hall) made areas available for work and were not in breach of contract, even if Kitsons were brought to a complete stop. Similarly, in ***Martin Grant v Sir Lindsay Parkinson* (1984)**,[246] there was no entitlement for the sub-contractor to claim extra due to delays to the main contract programme.

Linking a sub-contract with a main contract programme does not necessarily help in passing sub-contractor claims directly to the employer[247] (Chapter 3.5). Consequently, FIDIC proposed the **Sub-Contract Form (2011),**[248] which regulates back-to-back provisions with FIDIC-1999.

EOT claims between a main contractor and a sub-contractor can become complex, and English courts may encourage multi-tier settlement. Where a sub-contractor claims against a

---

[243] *Pigott Foundations v Shepherd Construction* [1994] 67 BLR 48
[244] Roger Knowles, *200 Contractual Problems and their Solutions* (3rd edition, Willey-Blackwell, UK, 2012), p 85
[245] *Kitson Sheet Metal Ltd v Matthew Hall Mechanical & Electrical Engineers Ltd* [1989] BLR 82
[246] *Martin Grant & Co Ltd v Sir Lindsay Parkinson & Co Ltd* [1984] 3 ConLR 116
[247] Ali Haidar and Peter Barnes, *Delay and Disruption Claims in Construction* (2nd Edition, ICE Publishing, UK, 2014), page 57
[248] FIDIC Conditions of Subcontract for Construction for Building and Engineering Works Designed by the Employer, 2011

main contractor for employer's delays, the sub-contractor can be forced to accept a settlement made between the employer and main contractor, provided that such settlement is reasonable.[249][250] In ***John Hunt Demolition v ASME Engineering* (2007)**,[251] Hunt was a sub-contractor to Kier for demolishing works, and ASME was their sub-sub-contractor for temporary supports. Hunt and Kier settled the claims, and Hunt sought to recover them from ASME. Judge Coulson decided that the main contract settlement was unreasonable and the lesser sum could only be recoverable from ASME.

EOT claims in main contracts and sub-contracts are technically similar.[252] EOT notice provisions (Chapter 4.3), contemporary records (4.4), concurrent delays (4.5), float ownership (4.6), methods of delay analysis (3.4) and delay costs (3.5) are all applicable.

The sub-contractor should not claim for EOT directly against the employer as there is no contractual relationship between them; sub-letting risks are born by the main contractor.[253] FIDIC-1999 stipulates that Contractor *'shall be responsible for the acts or defaults of any Sub-Contractor'* (4.4, Subcontractors), including 'nominated sub-contractors', although the Contractor may raise a reasonable objection to nomination (5.2, Objection to Nomination).

Nomination may disturb the line of responsibility and this provoked contradictory court decisions in England. In ***Bickerton v North West Hospital Board (1970)*[254]**, the employer was liable to re-appoint a replacement nominated sub-contractor upon the termination of the original one. In contrast, in ***Percy Bilton v Greater London Council (1982)*[255]**, prompt re-nomination by the employer was acceptable and the contractor was liable for delay of the new sub-contractor.

---

[249] Roger Knowles, *200 Contractual Problems and their Solutions* (3rd edition, Willey-Blackwell, UK, 2012), discussion about multi-tier settlements on pages 299-300

[250] Discussion about the case *of Hunt v ASME* (2007) by Daniel Atkinson, barrister and engineer at <http://www.supplymanagement.com/law/court-reports/john-f-hunt-demolition-ltd-v-asme-engineering-ltd> accessed on 23-1-2015

[251] *John F Hunt Demolition v ASME Engineering* [2007] EWHC 1507 (TCC)

[252] Roger Knowles, *200 Contractual Problems and their Solutions* (3rd edition, Willey-Blackwell, UK, 2012), p 122, p 187

[253] John Murdoch, Will Hughes, *Construction Contracts – Law and Management* (4th edition, Taylor & Francis, UK, 2008), p 274, para 19.5.2 Position of the main contractor

[254] *Bickerton v North West Metropolitan Regional Hospital Board* [1970] 1 WLR 607

[255] *Percy Bilton v Greater London Council* [1982] 1 WLR 794

Generally, compromises about main contractor's responsibilities and control over his sub-contractors have been criticised.[256] The concept of post-contract nomination has been dropped from JCT (2005) and NEC3 forms, but 'listed' (named) sub-contractors have been retained, and the main contractor is liable for them. This was confirmed in ***FB McKee v North West Regional College (2010),***[257] where the windows sub-contractor was named/approved, together with details that amended the windows system, which did not integrate with the cladding system; the court decided that the main contractor was responsible for named sub-contractor's work.

The UAE Civil Code allows a contractor to sub-let the works (part or the whole), unless prohibited by the contract or the nature of the works (Article 890):

> *'A contractor may entrust the performance of the whole or part of the work to another contractor unless he is prevented from so doing by a condition of the contract, or unless the nature of the work requires that he do it in person.'*

A sub-contractor has no right against an employer, unless the main contractor has assigned his entitlement to payment for the relevant sub-contract works to the sub-contractor and the employer has agreed to the assignment (Article 891):

> *'A sub-contractor shall have no claim against the employer for anything due to him from the first contractor unless he has made an assignment to him against the employer.'*

All rights and liabilities for the sub-let works are therefore a matter between the contractor and his subcontractor. Even where the sub-contractor provided warranties (collateral, direct) to the employer, this does not give any right to a sub-contractor to claim against an employer, unless there are special circumstances where a legal relationship can be established between the employer and the sub-contractor. [258]

---

[256] Ian Duncan Wallace, *Hudson's Building and Engineering Contracts* (Sweet & Maxwell, 1994, 11th Edition) para 13.010-13.011

[257] *FB McKee & Company Ltd v North West Regional College* [2010] NIQB 59

[258] Al Tamimi & Co, UAE, *Law Updates*, <http://www.tamimi.com>: *UAE & Chinese Construction Law (Part II),* by Eric Teo, August-September 2011, <http://www.tamimi.com/en/magazine/law-update/section-7/august-september-1/highlights-of-the-laws-of-the-united-arab-emirates-the-peoples-republic-of-china-and-the-common-law.html> accessed 05-08-2014

The improper nomination might create such special circumstances. In the **Dubai Court of Cassation Case, 266/2008**,[259] the employer (not the main contractor, who had no control) was responsible for delays caused by a nominated sub-contractor. In the **Dubai Court of Cassation Case 213/2008**,[260] the contractor was not held liable for delays caused by the non-performing nominated sub-contractor, which he was forced to accept.

If there are valid reasons for nomination (e.g. long-term alliance with the employer/operator, price benefit offered only to the employer), the contract should clarify main contractor's responsibilities.

4.8 Admissible delay costs and exclusion of consequential loss

The recommended breakdown of delay costs (Chapter 3.5) applies in the UAE, but differentiation between 'direct' and 'consequential' losses should be further discussed.

English law follows that 'direct or consequential' depends on whether a particular loss falls within the rules of natural flow from the breach and remoteness of damage. In ***British Sugar v NEI Power Plant Projects* (1997)**,[261] the Court of Appeal referred to ***Hadley v Baxendale* (1854)**[262] and interpreted that first leg (losses arising naturally) represented 'direct', while the second leg (special damages, which parties had in mind when entering into contract) represented 'consequential' losses.

In ***Croudace Construction v Cawoods Concrete Products* (1978)**,[263] a sub-contract to supply masonry blocks excluded liability for any ‘consequential loss or damage’. The main contractor claimed for loss of productivity due to defective blocks, inflation costs resulting from delay, plus sub-contractor claims. The Court of Appeal held that, despite the clause, the main contractor was entitled to recover for all these items of loss.

[259] Dubai Court of Cassation Case 266/2008 (17 March 2009)
[260] Dubai Court of Cassation Case 213/2008 Commercial Appeal (19 January 2009)
[261] *British Sugar plc v NEI Power Plant Projects Ltd* [1997] 87 BLR 42
[262] *Hadley v Baxendale* [1854] 156 ER 145
[263] *Croudace Construction Ltd v Cawoods Concrete Products Ltd* [1978] 2 Lloyd’s Rep 55

Similarly, in ***McCain Foods v Ec-Tech (Europe)*** **(2011)**,[264] 'consequential loss' was excluded from the liability in a contract for gas system installation, but employer's losses in production due to the failure of supplier were held not to be 'consequential'.

In general, consequential losses in English law do not include those losses which are normal, usual and foreseeable; a consequential loss must not be foreseeable, but peculiar to the particular post-contract circumstances.[265]

The UAE Civil Code defines loss or 'harm' as follows (Article 283):

> *'(1) Harm may be direct or consequential.*
>
> *(2) If the harm is direct, it must unconditionally be made good, and if it is consequential there must be a wrongful or deliberate element and the act must have led to the damage.'*

'Consequential harm' may include loss of profit, but a 'deliberate element' needs to be demonstrated. **Dubai Court of Cassation** required a 'stronger' element than mere negligence.[266] Losses of profit have been awarded in UAE courts where the occurrence of damage is certain in future,[267] which resembles English principles of 'following naturally from the breach' and 'being foreseeable'. Moral damages may also apply in cases of *'infringement of liberty, dignity, honour, reputation, social standing or financial condition*' (Article 293(1)).

Damages at UAE law are based on the loss to claimant and not gain to the defendant.[268] The Civil Code warns that *'any condition purporting to provide exemption from liability for a harmful act shall be void'* (Article 296), and *'the judge may in all cases...vary such agreement so as to make the compensation equal to the loss'* (Article 309(2)). Provisions of 'good faith' (Article 246) and 'unjust enrichment' (Articles 318-319) may also apply.

---

[264] *McCain Foods GB Ltd v Ec-Tech (Europe) Ltd* [2011] EWHC 66
[265] Roger Knowles, *200 Contractual Problems and their Solutions* (3rd edition, Willey-Blackwell, UK, 2012), p 122, p 1236, para 10.20 - What is meant in legal terms by the words 'consequential loss'?
[266] Julio Cesar Bueno (Editor), *The project and construction review* (Law Business Research, 2011), *Chapter 25 – United Arab Emirates* by Leonora Riesenburg, Galadari & Associates, Dubai, page 292
[267] Ibid
[268] Ibid

UAE law provisions suggest that express exclusions of 'consequential losses' from EOT claims, which are not uncommon in UAE contracts, may raise opposing opinions on what constitutes 'consequential losses'.

4.9 Pre-agreed delay damages

Under English law, the parties are free to pre-agree the liquidated damages (LDs) when negotiating their contract,[269] limiting the contractor's liability for delay damages. When claiming LDs, the employer does not have to prove that he has actually suffered any loss.[270]

English law establishes LDs as a genuine pre-estimate of damages, and not as a penalty, which is unenforceable.[271] The House of Lords distinguished LDs from penalties in ***Dunlop Pneumatic Tyre v New Garage and Motor Company (1915)***;[272] the sum must not be 'extravagant and unconscionable'. If LDs do not represent a genuine pre-estimate, the contractor may argue that LDs constitute a penalty. Such challenge was rejected in ***Alfred McAlpine Capital Projects v Tilebox (2005)***[273] as the court found that £45,000.00/week was a reasonable pre-estimate at the time of contracting, close to the weekly rental value. In ***Volkswagen Financial Services v Ramage* (2007),**[274] however, the LDs clause was held to be a penalty and thus unenforceable.

In ***Bramhall and Ogden v Sheffield City Council* (1985)**,[275] in the absence of any provision for sectional completion of 123 dwellings, the judge disapproved deduction of LDs for individual dwellings, but damages for breach of contract were still possible. In ***Temloc v Errill Properties (1987),***[276] the employer inserted 'nil' in the Appendix as the rate for LDs; it was held that this precludes any employer's claim for late completion.

The UAE Civil Code provides legal ground for the parties to agree the amount of LDs in advance (Article 390):

---

[269] John Murdoch, Will Hughes, *Construction Contracts – Law and Management* (4th edition, Taylor & Francis, UK, 2008), p 309, para 21.2.1 Nature and purpose of liquidated damages
[270] Royal Institution of Chartered Surveyors (RICS), *Damages for delay to completion* (1st Edition, RICS Professional Guidance Note, UK, 2014), page 3
[271] MacRoberts Solicitors, *MacRoberts on Scottish Building Contracts* (2nd edition, Blackwell Publishing, UK, 2008), p 117, para 6.9.2 Where liquidated damages provisions are not enforceable
[272] *Dunlop Pneumatic Tyre Co Ltd v New Garage and Motor Company Limited* [1915] AC 79
[273] *Alfred McAlpine Capital Projects v Tilebox Limited* [2005] BLR 271
[274] *Volkswagen Financial Services (UK) Ltd v George Ramage* [2007] CTLC 119
[275] *Bramhall and Ogden Ltd v Sheffield City Council* [1985] 29 BLR 73
[276] *Temloc Ltd* v *Errill Properties Ltd* [1987] 39 BLR 34

'1) The contracting parties may fix the amount of compensation in advance by making a provision therefor in the contract or in a subsequent agreement, subject to the provisions of the law.

2) The court may, on the application of either party, vary such agreement so as to make the compensation equal to the loss and any agreement to the contrary shall be void.'

As per Article 390(2), pre-agreed limits may be revisited to reflect actual losses[277] and LDs have been previously reduced by UAE courts.[278][279] The **Abu Dhabi Case 25/24 (2004)**[280] clarified that LDs may be entirely set aside; *'if the contractor succeeds in establishing the absence of loss, the agreed compensation should be repudiated.'*

However, increasing the pre-agreed compensation is less clear, and the burden of proof is shifted onto the employer, who must establish that the actual loss exceeds the LDs.[281]

UAE law follows that the primary obligation is to complete the work in time, and liability for actual damages arises from the breach of this primary obligation; payment of LDs is considered to be the secondary obligation.[282] Hence, the LDs clause may become valueless if a construction contract is terminated, and the employer may then claim general unliquidated damages. This was applied in the **Dubai Court of Cassation Case 302/21/2001**.[283]

In the **Dubai Court of Cassation Case 184/2008,**[284] the contract was for two buildings (AED4.9m, 12 months), but the work was initially delayed due to the redesign of foundations

---

[277] Al Tamimi & Co, UAE, *Law Updates*, <http://www.tamimi.com>: *Can we really limit liability*, by Faisal Attia, November 2012, <http://www.tamimi.com/en/magazine/law-update/section-6/november-3/can-we-really-limit-liability.html> accessed 05-08-2014

[278] Antonios Dimitracopoulos, *Construction contracting in the Middle East: regional departures from international practices,* Bin Shabib & Associates (BSA) LLP, Dubai, <http://www.bsa.ae/pdf/CONSTRUCTION_LAW_INTERNATIONAL.pdf> accessed 27-04-2014

[279] Al Tamimi & Co, UAE, *Law Updates*, <http://www.tamimi.com>: *The Middle East, construction and the law*, by Adam Balchin, February 2013, <http://www.tamimi.com/en/magazine/law-update/section-5/february-4/the-middle-east-construction-and-the-law-1.html> accessed 05-08-2014

[280] High Federal Court, Abu Dhabi, Case 25/24, 1 June 2004 (Civil)

[281] *Liquidated damages under UAE and UK law: a comparison,* <http://www.fenwickelliott.com/research-insight/annual-review/2013/liquidated-damages-uae-uk-law-comparison> accessed 30-01-2015

[282] Ibid

[283] Dubai Court of Cassation Case 302/21 (17 June 2001)

[284] Dubai Court of Cassation Case 184/2008 (30 December 2008)

interfering with the adjacent building. The court approved an EOT based on 'as-planned impacted' method, but also found that the contractor was responsible for further delays, so LDs were still applicable beyond the revised completion date.

In another **Dubai Court of Cassation Case 1/2006,**[285] the contractor did not submit an updated programme so it became difficult to establish that the contractor was solely responsible for delays as there were documented employer delay events (variations). The lack of programme updates worked in contractor's favour and LDs were not imposed.

Penalty damages are enforceable in the UAE as opposed to English law. In the **Dubai Court of Cassation Case 138/1994**,[286] in a delay dispute between a Contractor and his sub-contractor, there was an express penalty clause, but the court did not draw a strict distinction between a penalty provision and an LDs provision.

The **DIFC Courts in Dubai**[287] apply their own DIFC law (legislation, regulations and cases) to resolve construction disputes. **DIFC Law of Contract (2004)**[288] states (Article 122):

> *'Where the contract provides that a party who does not perform is to pay a specified sum...the aggrieved party is entitled to that sum irrespective of its actual harm...the specified sum may be reduced to a reasonable amount where it is grossly excessive'.*

DIFC Courts have enforced the LDs clause in ***Arabtec Construction v Ultra Fuji International* (2007),**[289] but there is still no precedent for 'grossly excessive' LDs.[290]

FIDIC Sub-Clause 8.7 (Delay Damages) requires that Appendix to Tender must state the daily sum and maximum total amount of the damages (typically, 10% of the Contract Price) due from the Contractor to the Employer if the Works are not completed in time. FIDIC

---

[285] Dubai Court of Cassation Case 1/2006 (16 April 2006)
[286] Dubai Court of Cassation Case 138/1994; see also <http://www.constructionweekonline.com/article-324-how-does-local-law-deal-with-liquidated-damages/#.U1VtoGeKDug> accessed 22-04-2014
[287] Dubai International Financial Centre (DIFC), < https://www.difc.ae/difc-courts-0> accessed 30-01-2015
[288] DIFC Law of Contract (Law No. 6 of 2004)
[289] *Arabtec Construction LLC v Ultra Fuji International LLC* (2007) DIFC Case CFI 004/2007, Dubai
[290] Al Tamimi & Co, UAE, *Law Updates*, <http://www.tamimi.com>:
Liquidated damages in the DIFC courts, by Tarek Shrayh, March 2014, <http://www.tamimi.com/en/magazine/law-update/section-8/march-7/liquidated-damages-in-the-difc-courts.html> accessed 05-08-2014

practitioners generally interpret the word 'damages' as a reasonable estimate of actual losses; any 'penalties' should be clarified within the Particular Conditions.[291]

LDs in UAE should not be looked at from the perspective of English law. There is no requirement under UAE law for the pre-agreed damages to be a 'genuine pre-estimate of loss', nor is there any prohibition against the damages having a punitive intention.[292]

4.10 Acceleration of the works

The contractor may need to accelerate due to his own delays. FIDIC Sub-Clause 8.6 (Rate of Progress) entitles the Engineer to instruct the Contractor to expedite in those cases, at Contractor's cost. If the acceleration measures cause the Employer to incur additional costs, these can be recovered under Sub-clause 2.5 (Employer's Claims).

A situation can arise where the contractor may be entitled to an EOT, but in the absence of Employer/Engineer's decision he faces a dilemma whether to increase resources and accelerate on his own to avoid paying LDs; this is known as 'constructive acceleration'.[293] Such choice was recognized in ***Ascon Contracting v McAlpine Construction* (1999);**[294] it was held that sub-contractor is not obliged to accelerate facing main contractor's delays. Constructive acceleration claim was approved in ***Motherwell Bridge Construction v Micafil Vakuumtechnik* (2002),**[295] where Motherwell was a sub-contractor to Micafil for autoclaves (large steel vessels for power cables) under the FIDIC contract. Motherwell was entitled to recover premiums paid for labour overtime and disruption (10%), when they were pressurised by Micafil to keep work up to schedule without an EOT granted to them. However, analysts suggest that the decision is very much on its own facts.[296][297]

---

[291] Brian Barr and Leo Grutters (originally by Brian Totterdill), *FIDIC Users' Guide* (ICE Publishing, UK, 2014), page 176

[292] International Comparative Legal Guides (ICGL), *United Arab Emirates – Construction & Engineering Law 2014*, by Adam Balchin and Euan Lloyd, Al Tamimi & Company, 2014, available at <http://www.iclg.co.uk/practice-areas/construction-and-engineering-law/construction-and-engineering-law-2014/united-arab-emirates> accessed 14-02-2015, para 2.3

[293] Institution of Civil Engineers (ICE), *ICE Manual of Construction Law* (Thomas Telford, UK, 2011), p 445, para 25.6.4 Constructive acceleration claim

[294] *Ascon Contracting Ltd v Alfred McAlpine Construction Isle of Man Ltd* [1999] 66 Con LR 119 at p. 146

[295] *Motherwell Bridge Construction Ltd v Micafil Vakuumtechnik* [2002] TCC 81 ConLR 44

[296] Institution of Civil Engineers (ICE), *ICE Manual of Construction Law* (Thomas Telford, UK, 2011), p 446

[297] Derek Nelson, *What is Constructive about Acceleration,* Publication of Hill International, Inc, April 2013, p 17

The **SCL Protocol** defines that 'constructive acceleration' follows *'failure by the Employer to recognise that the Contractor...is entitled to en EOT,'* but admits that this is *'not (currently) a recognised concept under English law.'*[298]

The ***ICC Case 10847*** **(2003)**[299] resolved an EOT dispute under FIDIC-1987. The tribunal required from the Claimant (Contractor) *'to demonstrate that it had in fact accelerated because it had been denied its entitlement to a time extension and not merely that the Claimant had brought additional resources to the Site'.*

The position under the UAE Civil Code is similarly unclear.[300] Actions of the parties must be *'consistent with the requirements good faith'* and *'unlawful exercise of right'* is prohibited (Articles 246; 106). The Engineer has a duty to *'make a fair determination...taking due regard of all relevant circumstances.'* (FIDIC Sub-Clause 3.5). Any pressure on the Engineer not to award an EOT would be in contrast with the Civil Code, and those responsible could face consequences: *'Any harm done to another shall render the perpetrator...liable to make good the harm.'* (Article 282).

If the contractor is not responsible for the delay, there should be an agreement for acceleration measures, or an instruction to accelerate. In FIDIC contracts, an agreement can follow the Contractor's proposal under Sub-Clause 13.2 (Value Engineering), while an instruction for a Variation to the sequence or timing of the Works should be given by the Engineer (not Employer) under Sub-Clause 13.1(f) (Right to Vary).

A contractor who is simply being asked to accelerate, without any proper instruction, should try to clarify and/or negotiate an agreement, or at least notify the Engineer that he is accelerating on the basis that he will be compensated, and request an instruction.

4.11 Mitigation of delays

The issue of the contractor's right or obligation to reduce the effect of delays may affect the evaluation of an EOT claim.

---

[298] Society of Construction Law (SCL), *Delay and Disruption Protocol,* October 2002, reprinted October 2004, available at <http://www.scl.org.uk/resources> accessed 26-07-2014, Appendix A (Definitions and glossary), page 53

[299] ICC Case No. 11847 (2003), published in the ICC Court of Arbitration Bulletin Vol 23/No 2 -2012, page 36

[300] Chris Larkin, *Constructive acceleration demands clear intentions,* Construction Week, UAE, 10 March 2007, <http://www.arabianbusiness.com/constructive-acceleration-demands-clear-intentions-148100.htm> accessed 06-02-2015

In English law, ***British Westinghouse v Underground Electric Railways* (1912)**[301] set that injured party cannot recover any loss which could have been avoided by reasonable steps. The standard of reasonableness is not very high as the other party is the wrongdoer, see ***Dimond v Lovell* (1999).**[302] In ***DSND Subsea v Petroleum Geo-Services ASA* (2000),**[303] the sequence of the works was specified in the programme, but contractor's 'obligation to mitigate delays' did not include re-sequencing (commencing deep sea diving ahead of risers installation). The 'best endeavours obligation' does not require the contractor to expend substantial sums to reduce the delay, see ***Midland Land Reclamation v Warren Energy* (1997)**;[304] it covers only what is commercially practicable and reasonable, see ***Terrell v Mabie Todd* (1952).**[305] It is interpreted that 'practicable' and 'reasonable' includes proper warnings/notices and details requested by the Engineer.[306]

UAE law seems to follow similar principles. The courts consider a duty to mitigate to the extent that recoverable losses are those which cannot be avoided by exerting reasonable effort.[307] The claim may fail where that loss might have been prevented through Contractor's cooperation or mitigation.[308] This is consistent with the 'good faith' provisions (Chapter 4.2). The Civil Code (Article 389) further hints at mitigation[309] when stating:

> *'If the amount of compensation is not fixed by law or by the contract, the judge shall assess it in an amount equivalent to the damage in fact suffered at the time of the occurrence thereof'.*

FIDIC does not expressly describe mitigation. However, Sub-Clause 7.1 specifies Manner of Execution *'in accordance with recognised good practice',* and 8.1 (Commencement of Work) requires the Contractor to *'proceed with the Works with due expedition and without delay,'*

---

[301] *British Westinghouse Electrical Manufacturing Co Ltd v Underground Electric Railways* [1912] AC 673
[302] *Dimond v Lovell* [1999] EWCA Civ 1311
[303] *DSND Subsea Ltd v Petroleum Geo-Services ASA and PGS Offshore Technology AS* [2000] WL 1741490
[304] *Midland Land Reclamation Ltd v Warren Energy Ltd* [1997] EWHC Technology 375
[305] *Terrell v Mabie Todd & Co Ltd* [1952] 69 RPC 234
[306] Daniel Atkinson, *Delay and Disruption - Reducing Delays,* 22 November 2012, <http://www.atkinson-law.com/library/article.php?id=148> accessed 06-02-2015
[307] Owen Delaney, *UAE: When International Standards Meet Local Laws,* 27 October 2011, < http://www.mondaq.com/x/150738/Contracts+Deeds/When+International+Standards+Meet+Local+Laws+Part+1+Construction+Contracts+In+The+UAE+And+Middle+East> accessed 07-02-2015
[308] see a legal column in The National, UAE, by Bradley Hope at < http://www.thenational.ae/blogs/crane-country/ask-a-lawyer-good-faith-in-construction-disputes>, accessed 07-02-2015
[309] Al Tamimi & Co, UAE, *Law Updates*, <http://www.tamimi.com>:
Prevention is better than cure for building defects in the UAE, by Niall Clancy, April 2014, <http://www.tamimi.com/en/magazine/law-update/section-8/april-7/prevention-is-better-than-cure-for-building-defects-in-the-uae.html> accessed 06-02-2015

which suggests applying resources in such a way as to mitigate the consequences of delay.[310] Sub-Clause 8.3 (Programme) reminds of cooperation and early warnings of *'circumstances which may adversely affect the work'*.

In FIDIC contracts, The Employer may specifically insert an obligation to mitigate delays into the Particular Conditions, rather than try and suggest at a later date that such a term can be implied.[311]

4.12 Delays due to suspension

The employer has an obligation to pay for the works. In England, construction contracts under the **Construction Act 1996**[312] (s.104-106) must regulate the payments (s.110(1)), including stage payments in support of contractor`s cashflow (s.109). The contractor has the right to suspend work for non-payment (s.112(1)), entitling him to an EOT (s.112(4)). The **Local Democracy Act 2009**[313] amends the Construction Act and provides for the recovery of costs reasonably incurred as a result of such suspension (s.112(3A)).

Contractor's right to be paid can not be manipulated by under-certification. In ***Henry Boot v Alstom Combined Cycles* (2005)**,[314] the absence of a certificate was not a bar to the right to payment. In ***Beaufort Developments v Gilbert-Ash* (1988)**,[315] a party was allowed to sue for payment in the courts for sums not certified, because interim certificates are not conclusive.

Under the UAE Civil Code, in the absence of a contractual right to suspend work for non-payment, a contractor may rely on Article 247:

> *'If the mutual obligations are due for performance, each of the parties may refuse to perform his obligation if the other contracting party does not perform that which he is obliged to do.'*

---

[310] Institution of Civil Engineers (ICE), *ICE Manual of Construction Law* (Thomas Telford, UK, 2011), p 432, para 25.2.8 Mitigation of delay
[311] Jeremy Glover and Simon Hughes, *Understanding the New FIDIC Red Book: A Clause-by-clause Commentary* (2nd Edition, Sweet & Maxwell, 2011, UK), para 8-034, p 192
[312] Housing Grants, Construction and Regeneration Act 1996
[313] Local Democracy, Economic Development and Construction Act 2009
[314] *Henry Boot Ltd v Alstom Combined Cycles Ltd* [2005] EWCA Civ 814
[315] *Beaufort Developments (NI) Ltd v Gilbert-Ash NI Ltd and Others* [1988] UKHL 19

Article 414 similarly allows a *'person who is obliged to perfor*m' to *'refrain from so doing'* if the other person has not discharged his related obligations.

The right to suspend work under these provisions includes the non-payment, but also other situations where the other party fails to perform.[316] However, before exercising the right to suspend work a contractor should address any issues that prompted non-payment. **The Dubai Court of Cassation** held that 'good faith' is applicable to suspension; a party cannot invoke the right to suspend work if the other party has substantially discharged its obligations leaving only a minor part unperformed.[317] Suspending performance for a minor breach would be unlawful.[318]

FIDIC provides remedies where the Employer fails to make payment. The Contractor may recover financing charges (Sub-Clause 14.8, Delayed Payment), suspend or reduce the rate of work and claim for EOT/Cost/profit (16, Contractor's Entitlement to Suspend Work), or even exercise termination (16.2, Termination by Contractor).

For any other reason, the Engineer may instruct the Contractor to suspend (part of) the Works under Sub-Clause 8.8 (Suspension of Works), which entitles the Contractor to an EOT and Cost (but not profit!), except where such suspension is caused by Contractor's faulty design, workmanship, materials or failure to protect the Works (8.9, Consequences of Suspension).

FIDIC provisions for suspension or reduction in the rate of work for non-payment, which allow for recovery of reasonable profit, appear to be more favourable than the provisions of the UAE Civil Code, where there is no such clear and express provision.[319]

---

[316] Al Tamimi & Co, UAE, *Law Updates*, <http://www.tamimi.com>:
UAE & Chinese Construction Law (Part II), by Eric Teo, August-September 2011, <http://www.tamimi.com/en/magazine/law-update/section-7/august-september-1/highlights-of-the-laws-of-the-united-arab-emirates-the-peoples-republic-of-china-and-the-common-law.html> accessed 05-08-2014

[317] Ibid

[318] International Comparative Legal Guides (ICGL), *United Arab Emirates – Construction & Engineering Law 2014*, by Adam Balchin and Euan Lloyd, Al Tamimi & Company, 2014, available at <http://www.iclg.co.uk/practice-areas/construction-and-engineering-law/construction-and-engineering-law-2014/united-arab-emirates> accessed 09-08-2014, para 3.10

[319] Al Tamimi & Co, UAE, *Law Updates*, <http://www.tamimi.com>:
UAE & Chinese Construction Law (Part II), by Eric Teo, August-September 2011, <http://www.tamimi.com/en/magazine/law-update/section-7/august-september-1/highlights-of-the-laws-

Unlike in FIDIC, unilateral suspension by the employer is not specifically addressed in UAE law.

4.13 Global EOT claims

Global claims are the practice of many contractors that submit an overall evaluation of delay ('global delay') or loss/expense ('global cost') under a number of events, without demonstrating direct causality, but rather inferring a global link. By their nature, global claims are more subjective than objective in defining a causal link and quantum.[320]

Under English law, global claims often lead to disputes and can be outright rejected if they don't show a minimum of qualities. The SCL Protocol clearly discourages global claims.[321] Case law does not provide much support, but does not dismiss them in full.

In ***John Doyle Construction v Laing Management (Scotland)*** **(2004),**[322] Mr Justice Ramse considered global claims to be a risky business; he summarised that any claim should establish: (1) the occurrence of an event, (2) that loss/expense was suffered, and (3) that loss/expense was caused by the event. In ***London Underground Ltd v Citylink*** **(2007),**[323] a global claim was rejected, but this did not mean that no claim would succeed; the sections for which causation and quantum could be established were allowed to be resubmitted.

Global claims are more often accepted in international cases where a reasonably fast and fair solution is needed.[324] The rules of common sense will normally be applied when dealing with such claims. Disruption claims are the most notorious type of claims where a global approach might sometimes be justified.

---

of-the-united-arab-emirates-the-peoples-republic-of-china-and-the-common-law.html> accessed 05-08-2014

[320] Thierry Linares, *How to properly use global claims in disputes,* Expert's Corner Paper 2013-03, <http://www.projectvaluedelivery.com/expert/PVD_Expert_2013-03_Global_Claims_v0.pdf> accessed 14-02-2015

[321] Society of Construction Law (SCL), *Delay and Disruption Protocol,* October 2002, reprinted October 2004, available at <http://www.scl.org.uk/resources> accessed 26-07-2014, para 1.14.2

[322] *John Doyle Construction Ltd v Laing Management (Scotland) Ltd* [2004] SLT 678

[323] *London Underground Ltd v Citylink Telecommunications* [2007] EWHC 1749 (TCC)

[324] Ali Haidar and Peter Barnes, *Delay and Disruption Claims in Construction* (2nd Edition, ICE Publishing, UK, 2014), p 70

Recently, in ***Walter Lilly v MacKay*** **(2012),**[325] Judge Akenhead comprehensively reviewed the law on global claims, and favoured the more pragmatic and commercial approach:

- a contractor does not need to show that it is impossible to prove cause and effect; it is sufficient to prove the case on a balance of probabilities;
- it is open to a contractor to prove its entitlement with whatever evidence will satisfy the tribunal and there is no set way for contractors to prove the claim;
- there is nothing in principle 'wrong' with global claims; however, there are added evidential difficulties to prove that the loss would not have been incurred in any other event (e.g. if the offer was so low that the loss would have occurred irrespective of the delay events);
- the fact that contractor's events contributed to the global loss does not necessarily mean that the Contractor can recover nothing;
- global claims are not usually allowed if the actual costs attributable to individual loss causing events can be readily and practicably determined.

UAE court decisions suggest that entitlement to delay costs is not automatic and causal link should be established.[326] In **Dubai Court of Cassation (213/2008),**[327] the project was delayed for 316d due to employer's actions. The court awarded an EOT, but refused to award damages for administrative expenses and idle resources throughout the delay period. The judge stated that the contractor *'failed to prove the damage'* and refused to award any compensation without clearly proving the fault, damage and causal relationship.

FIDIC clearly favours contemporary records to support the claim. The global claim approach, however, might be used as an explanatory and negotiating argument in preliminary discussions with the Engineer.

---

[325] *Walter Lilly and Company v MacKay* [2012] BLR 503
[326] Abdurrahman Yousef Rahhal, *Entitlement to Extension of Time in cases of Concurrent Delays under the UAE Law*, MSc Dissertation, Faculty of Construction Law and Dispute Resolution, The British University of Dubai, UAE, June 2013, see the summary of court cases and conclusions on pages 47-49
[327] Dubai Court of Cassation (213/2008) Commercial Appeal (19 January 2009)

Global claims are easier and less expensive to prepare, but impose a strong burden of proof on the contractor. They should better be avoided where individual events and their consequences can be identified.

5 Recommendations and conclusions

5.1 Legal issues relating to EOT claims in FIDIC contracts under UAE law

The EOT provisions in FIDIC contracts (Chapter 2) originate from English law, but their operation under UAE civil law system may have different effects (Chapter 4).

Mandatory provisions of UAE law always take precedence over a contractual stipulation. Contract provisions, if not in conflict with the law, are usually given their direct meaning and any ambiguities are interpreted by looking into the real intention of the parties and the custom. This is a more subjective test than the English test of a reasonable/ordinary man.

A failure to act in good faith and any unlawful exercise of contractual rights is regarded as a breach of contract. Therefore, the Engineer should follow a fair approach when evaluating claims and the Employer should refrain from interfering. It is not recommended to abuse the bargaining power and impose unfair or uncertain terms; any uncertain obligations are resolved in favour of the party required to perform the obligation. This slightly differs from the English 'contra proferentem' rule, where uncertainties are interpreted against the creator.

Time bars to claim notices are a regular contentious issue, not only because of good faith, but also due to mandatory law provisions that stipulate long time bars for commercial claims. Rather than rejecting a large financial claim on the grounds of procedural technicalities (late notice, improper format of a notice), it is recommended to initially review the claim based on its merits and actual circumstances. Contractor's non-compliance with the contract provisions should be taken into account, as he is obliged by law to comply with clear contract expressions and give a fair chance to the Employer to apply corrective measures.

Resolution of concurrent delay scenarios is not straightforward under UAE law, which is similar to English law. UAE practice suggests that contractor should be entitled to an EOT due to a dominant employer's delay, even if the contractor himself was in parallel delay. Award of delay costs, however, may be much more complicated, as the contractor should not benefit financially from his own faults. This may be clarified in the FIDIC contract.

The ownership of float in the programme is also not expressly defined in FIDIC forms. UAE law provides no particular guidance and float may be owned by the contractor, the employer, or the project. In spite of varying opinions, it is recommended that float should be for the benefit of the contractor. Additionally, it would be prudent to focus more on the quality of the programme and create contractor's contingency activities in lieu of excessive floats.

Sub-contractor claims against the employer are usually not successful under UAE law, unless there are special circumstances where a legal relationship can be established between them. The nomination of a sub-contractor might create such special circumstances as evidenced by UAE court decisions. However, UAE employers still prefer long term alliances with specialised suppliers/sub-contractors and nomination remains part of UAE practice (unlike in England, where named sub-contractors are preferred). For nominations, it is recommended to clarify the main contractor's responsibilities in the Particular Conditions.

Exclusions of 'consequential losses' from the contractual right to claim may raise opposing opinions, because under UAE law no one can be exempted from liability for a harmful act. On the other hand, loss of profit and moral damages would need solid proof that occurrence of damage is certain in future, which is often extremely difficult to provide.

Any pre-agreed damages for delay, common in FIDIC contracts, should not be looked at from the perspective of English law. There is no requirement under UAE law for the pre-agreed damages to be a 'genuine pre-estimate of loss', nor is there any prohibition against the damages having a punitive intention. Pre-agreed damages may be revisited by UAE courts to reflect actual losses and might be even set aside in the absence of actual loss.

The UAE law position on acceleration by the contractor in the absence of a deserved EOT, known as 'constructive acceleration', is not clear. It is recommended to review such cases fairly, taking due regard of actual circumstances. Any pressure on the Engineer not to award an EOT would be in contrast with UAE law. If acceleration is necessary, it is recommended to discuss and agree on acceleration measures, or to instruct them under the FIDIC contract.

The issue of the contractor's obligation to mitigate the effect of delays may affect an EOT claim. UAE law applies principles that are similar to English law, where a duty to mitigate would limit recoverable losses to those which cannot be avoided. The claim may fail where losses might have been prevented through contractor's reasonable cooperation or mitigation. FIDIC does not expressly mention an obligation to mitigate delays, so it is recommended to clarify it in the contract.

Delays due to suspension for non-payment may be justified under UAE law, similar to English law. However, before exercising the right to suspend work a contractor should address any issues that prompted non-payment, because suspending performance for a minor breach would be unlawful in the UAE.

Finally, the importance of contemporary records can not be overstated. They may influence the outcome of an EOT claim review and there are evidences of rejected EOT costs by UAE

courts due to contractor failures to keep records and properly document costs and their cause-effect relationship with delay events, which seems to be in line with FIDIC's intentions. Global delay claims, without separating individual events and properly documenting their consequences, are obviously easier to prepare, but should better be avoided where possible. Electronic records and communications are a valid form of evidence in the UAE and their effectiveness may be enhanced by using electronic document management systems.

In conclusion, practitioners who prepare and/or implement FIDIC construction contracts should take into account the provisions of UAE civil law system. The Particular Conditions should be amended in accordance with the above recommendations as to align FIDIC forms with UAE law provisions and clarify rights and obligations of the parties in delay situations.

5.2 Contract practice for time management on UAE projects

The contract practice on UAE projects has been reviewed and benchmarked against the industry standards (Chapter 3).

Discussions and recommendations have been offered in relation to the construction programme (methodology, supporting information), progress reporting (variables, formats), methods for analysis of delay time (progressive/windows analysis recommended, where possible), costs (breakdown, calculation), presentation of EOT claims, and preventive use of risk management. Illustrative examples have been provided (Appendices 6.1-6.4).

It is noted that recommended elements of contract practice support the above legal findings. Properly developed project programme, with sound logic and sufficient (but not excessive) detail facilitates 'fair' evaluation that is favoured by FIDIC conditions and UAE law. Accurate and well-structured progress reports provide for essential contemporary records and substantiation to EOT claims. Standard delay analysis and cost calculation methods, applied in accordance with industry standards, increase the clarity of claim submissions.

Overall, improvements to the contract practice for time management may contribute to early identification and assessment of claim situations, offering an opportunity for corrective measures and mitigation. When an EOT is inevitable, evaluation of delay events and their consequences could be more transparent and may better reflect the actual events.

5.3 The final word

The recommended balanced discussions and legal interpretations of FIDIC provisions for EOT under UAE law should be followed and local construction contracts may be amended to reflect them.

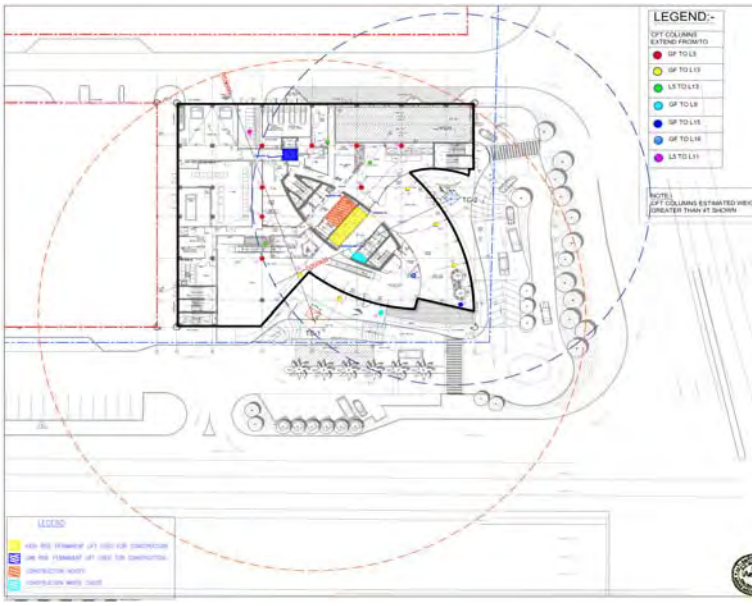
However, resolving these legal issues could be even more effective if supported by proper contract practice for time management, which may generate the necessary supporting information (‘contemporary records’ in FIDIC language) and ease decision-making.

Such an approach may better align the contractual relationship between the parties with rules of common sense and natural justice, which should prevail eventually.

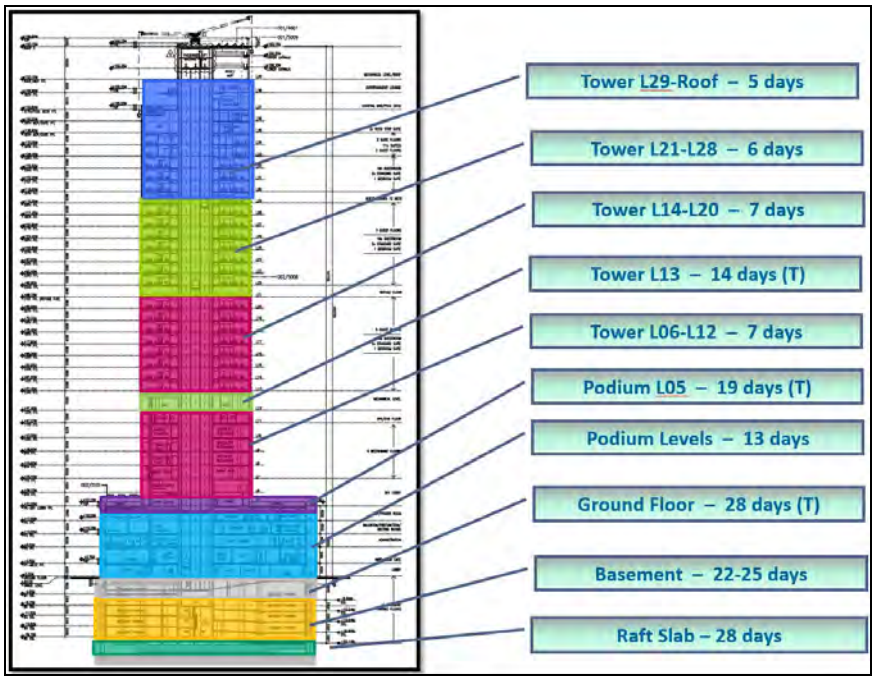
6 Appendices

6.1 Recommended substantiation to the Programme to improve its quality and suitability for EOT analysis

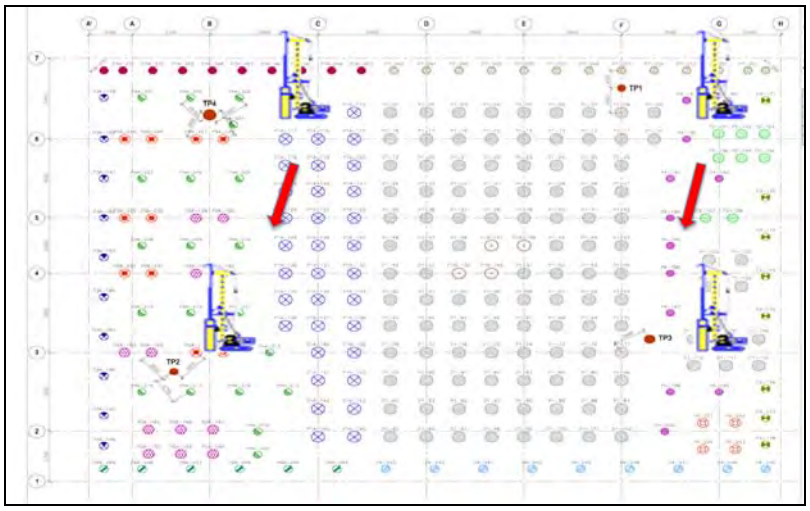
A. Analysis of site layout and logistics (example for a high-rise project)



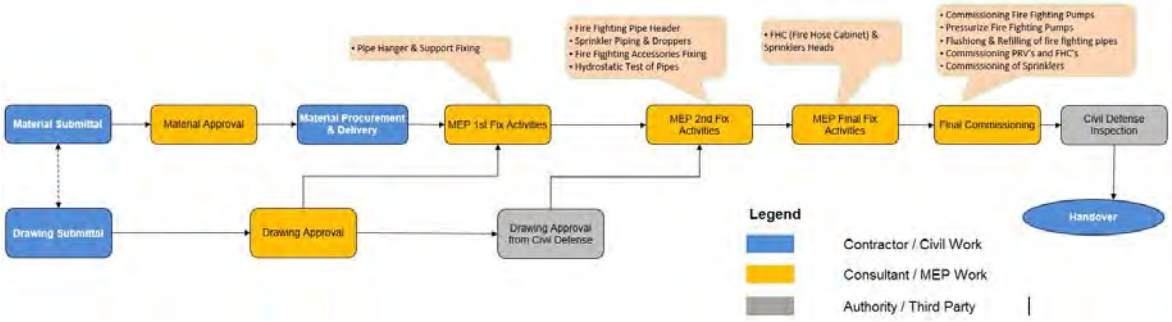
B. Studies of cycle times (example for concrete works)



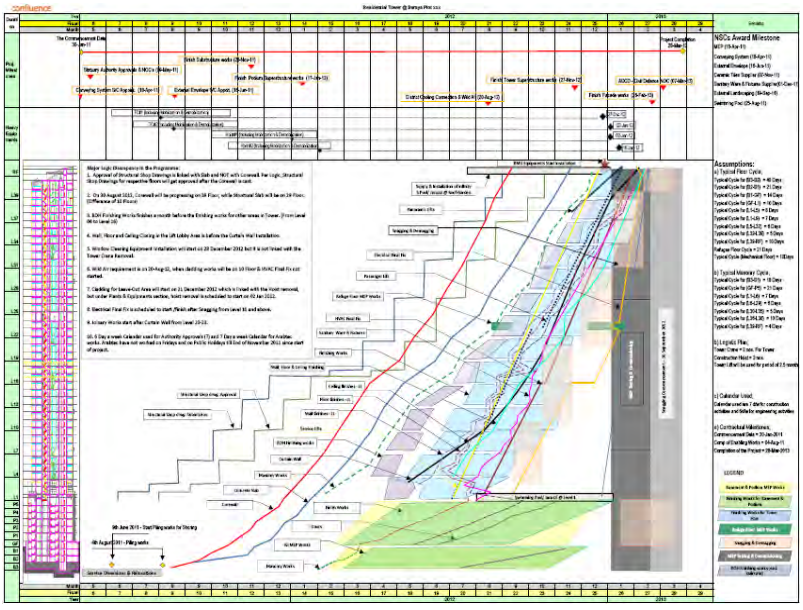
C. Optimization of crew movements (example for piling works)



D. Process charts and typical sequences of works (example for procurement, installation and statutory approvals for specialist fire fighting works)



E. Line of Balance chart demonstrating crew movements on a high-rise project



6.2 Recommended formats of progress reports to improve EOT contemporary records

A. Contractor's daily information report

Contractor's Logo	CONTRACTOR'S DAILY INFORMATION REPORT

Project Title:	<Insert Title>	**Employer:**	<Insert Name>
Site/Plot No:	<Insert No>	**Contractor:**	<Insert Name>
Contract Ref. No:	<Insert No>	**Engineer:**	<Insert Name>
Weather condition:	**Temperature (08:00):**	**Report No:**	<Insert No>
Clear, no rain or wind	**Temperature (15:00):**	**Report Date:**	DD-MMM-YY

Site Personnel	SHIFT		Site Personnel	SHIFT		Site Equipment	SHIFT		Idle
	DAY	NIGHT		DAY	NIGHT		DAY	NIGHT	
Site Management			**Direct Labour**			Bus 65 seater			
Project Director			Carpenter			Bus 30 seater			
Construction Team			Steel fixer			Mini Bus			
Construction Manager			Mason			Pick up			
Project Engineer			Helper			Shovel Wheel Loader			
Site Engineer			Scaffolder			Bob cat			
Section Engineer			Electrician			J.C.B Breaker / Loader			
Site Supervisor			Plumber			J.C.B Backhoe			
Plant Field Engineer			Rigger			Excavator			
General Foreman			Bobcat Operator			Dump Truck			
General Charge hand			J.C.B Operator			Boom Loader			
Land Surveyor			Dump Truck Operator			Concrete mixers			
Assistant Land Surveyor			Excavator Operator			Air Compressors			
Foreman Civil			Drivers			Concrete vibrators			
Foreman Electrical			Mechanic			Elec. bar bender			
Foreman Mechanical			Mobile Crane operator			Elec. bar cutter			
Foreman Scaffolding			Wheel Loader Operator			Mobile Crane 20t			
Charge Hand Scaffolding			A/C Mechanic			Generator 250 KVA			
Foreman Carpenter			Welder			Generator 40 KVA			
Charge Hand Carpenter			Painter			Generator 600/500 KVA			
Foreman Mason			Tower Crane Operator			Angle Grinder 4.5"			
Charge Hand Mason			Boom Loader Operator			Angle Grinders 9"			
Foreman Steel Fixer			**Administration Staff**			Demolition Hammer			
Charge Hand Steel Fixer			Administration			Jack Hammer			
Charge Hand Steel Fixer			Administration Officer			Rotary Hammer 7.46			
Site Office Technical Team			Office Clerk			Rotary Hammer 2.26			
Technical Manager			Office Boy			Circular Saw 7"			
Sr. Architect			IT Engineer			Jig Saw			
Technical Engineer			Secretary			Drill Machine 16 mm			
Material Engineer			Receptionist			Electrical Screw Machine			
Sr. Structural Engineer			Store Keeper			Table cutting Saw machine 14"			
Architect			Asst.Store Keeper			Submersible Pump			
Structural Engineer			Time Keeper			Air Blower			
Sr.Structural Draftsman			Driver			Empect Wrench 1/2"			
Structural Draftsman			Office Assistant			Cradle Screw Machine			
Architect Draftsman			Public Relation Officer			Pile Head Breaker hydrolic			
Draftsman			**Procurement and Logist**			Mini Excavator			
Sr. Document Controller			Procurement Manager			Vaccum Cleaner			
Document Controller			Logistics Officer			Circular Saw 9"			
Document Controller			Asst. Logistics Officer			Pedel Maxer			
QA/QC Manager			**HSE Team**			Power Float			
QA/QC Engineer			Safety Manager						
Lab Technician			Safety Engineer						
Planning and Commercial			Safety Officer						
Planning Manager			Safety Inspector						
Planning Engineer-Sr			Safety Assistant						
Commercial Manager			Security Guard						
Sr. Quantity Surveyor			First Aid Nurse						
Quantity Surveyor			Safety Attendant						
Total	**0**	**0**		**0**	**0**		**0**	**0**	**0**

Subcontractors

Site Personnel	SHIFT		Site Personnel	SHIFT		Site Equipment	SHIFT		Idle
	DAY	NIGHT		DAY	NIGHT		DAY	NIGHT	
<Insert Sub-Contractor Name>									
Site Technical Staff			**Direct Labour**			Diesel tank			
Project Manager			Pipe Fitter Charge Hand			Excavator			
Construction Manager			Pipe Fitter			Hydro breaker			
Project Engineer			Plumber Charge Hand			Truck 10t			
Safety Engineer			Plumber			Excavator			
Planning Engineer			Foreman Piping			Water Jetting Machine - Full S			
HVAC Engineer			Welder			Drilling Machine			
Site Engineer Plumbing			Electrical Charge Hand						
Sr. Electrical Engineer			Electrician						
Electrical Engineer			Foreman Electrical						
Sr. Mechanical Engineer			Mechanic						
CAD Coordinator			Sr. Electrician						
QA/QC Engineer			Ducting Charge Hand						
QS			Duct Erector						
Electrical Supervisor			Ducting Foreman						
Store Keeper									
Draftsman									
Doc. Controller									
Office boy									
Driver									
Total	**0**	**0**		**0**	**0**		**0**	**0**	**0**
<Insert Sub-Contractor Name>									
Site Technical Staff			**Direct Labour**						
Total	**0**	**0**		**0**	**0**		**0**	**0**	**0**
Total for Subcontractors	**0**	**0**	**Total No. of labors**	**0**	**0**		**0**	**0**	**0**

Brief Description of Works
DAY SHIFT
A. Area 01
1
2
3
4
B. Area 02
1
2
3
4
5
6
7
C. Area 03
1
2
3
4
5
D. Area 03
1
2
3
4
5
6
E. Area 04
1
2
3
4
NIGHT SHIFT
A. Area 01
1
2
3
4
B. Area 02
1
2
3
C. Area 03
1
2
3
D. Area 04
1

Manhour Summary for the Project

Until <Previous Date>	Manhours worked on <Today's Date>	Cumulative Manhours till Today	Remark
		0	

Summary of Key Materials Delivered to Site

Material	Unit	Qty Received	Remark
Concrete			
C20	m^3		
C40	m^3		
C50	m^3		
C70	m^3		
Total	m^3	0.00	
Steel/ Rebar Dia			
8mm	ton		
10mm	ton		
12mm	ton		
16mm	ton		
20mm	ton		
25mm	ton		
32mm	ton		
40mm	ton		
Total	ton	0.00	
Other Materials			

Remarks:

Prepared by Contractor: **Reviewed by Engineer:**

Sample Daily Report, Page 4 of 4

B. Contractor's weekly tracker sheet and weekly progress presentation

LOGO

Programming Weekly Tracker Sheet - <Project Name>

Statistics

Data Date:	26-Jan-12	Previous Update On:	16-Jan-12
Baseline Finish	29-Jan-13	Last update forecast finish	20-Mar-13
Rev. Contract Finish	28-Mar-13	This update forecast finish	25-Mar-13
Delay This Period (In Days):	5	Cumu. Delay (Rev. Contract):	
Planned % Complete		Last update Actual % Complete	
		This update Actual % Complete	

Key Activity / Milestones Comparison (This Reporting Period)

Sr. No.	Activity	Last Update		This Update		Delay	Comments
		Start	Finish	Start	Finish*		
1	B3 - Pour 4 / Part 1		25-Dec-11		10-Jan-12	16	
2	B3 - Pour 4 / Part 2		25-Jan-12		10-Feb-12	16	
3	B2 - Pour 1		21-Jan-12		25-Jan-12	4	
4	B2 - Pour 2		05-Feb-12		09-Feb-12	4	
5	B2 - Pour 3		23-Feb-12		20-Feb-12	-3	Delay due to NCR Issue for Concreting works on Basement 3
6	B1 - Pour 1		08-Mar-12		12-Feb-12	-25	
7	B1 - Pour 2		08-Mar-12		08-Mar-12	0	
8	B1 - Pour 3		08-Mar-12		12-Mar-12	4	
9	GF - Pour 1		22-Mar-12		04-Mar-12	-18	
10	GF - Pour 2		22-Mar-12		26-Mar-12	4	
11	GF - Pour 3		22-Mar-12		26-Mar-12	4	

* - Dates are derived from their Concrete Pour Plan and updated programme

Project Milestones

Sr. No.	Milestone	Rev. Baseline	Last Update		This Update		Comments
		Finish	Start	Finish	Start	Finish	
1	Ground Floor Structure	28-Nov-11		22-Mar-12		26-Mar-12	19 days delay
2	Start: Façade Installation	05-May-12		05-Sep-12		16-Sep-12	
3	Release: ID Info to Cont.	06-Feb-12		25-Apr-12		06-May-12	(-ve) 32 Days Float
4	Marble Material approval	01-Mar-12		21-Jul-12		23-Jul-12	
5	Delivery of BMU on site	10-Oct-12		04-Oct-12		15-Oct-12	
6	Removal of Hoist	01-Jan-13		26-Apr-13		30-Apr-13	19 Days Delay
7	Permanent Power-On	16-Feb-13		10-Jun-13		15-Jun-13	19 Days Delay
8	Super-Structure Works	27-Nov-12		22-Mar-13		26-Mar-13	19 Days Delay
9	District Cooling	24-Aug-12		13-Dec-12		17-Dec-12	Network Availability?
10	Project Completion	28-Mar-13		20-Jul-13		25-Jul-13	19 Days Delay

Narrative

Content

- Progress summary
  - Progress Update
  - Progress Summary
  - Progress Layout
- KPI's
- 1 – Month Look Ahead
- 2 - Weeks Look Ahead
- Engineering Status
- QA-QC Report
- Manpower
- Procurement Log
- Progress Photos

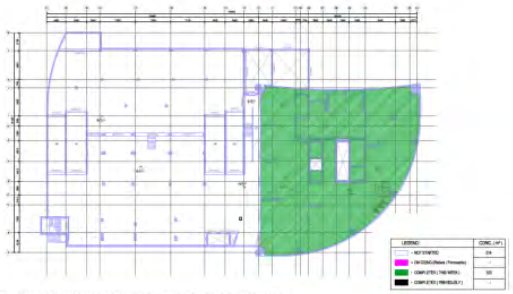
Progress Summary

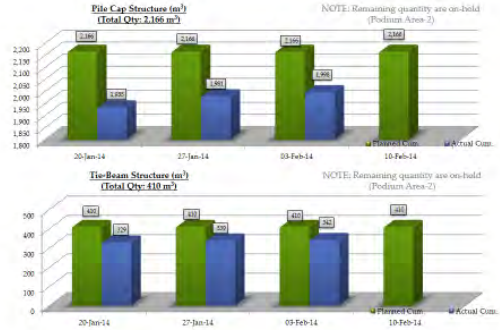
Progress Update

No	Activity Description		PERCENTAGE EOT1-BL	PERCENTAGE Actual	COMPLETION EOT1-BL	COMPLETION Forecast	REMARKS
Structural Works							
1	Pile Cap	Podium-Z1				25-Jan-14	Done
2		Podium-Z2			31-Dec-13	11-Jun-14	Utilized as segregation area
3	Tie-Beam	Podium-Z1				25-Jan-14	Done
4		Podium-Z2	100.00%	80.00%	7-Jan-14	18-Jun-14	
5	Backfilling (up to 3.95 level)	Tower	100.00%	30.00%	29-Dec-13	6-Feb-14	
6		Podium-Z1	100.00%	80.00%	11-Jan-14	30-Jan-14	
7		Podium-Z2				21-Jun-14	
8	Neck-Col. /Wall & Core Wall	Tower	100.00%	100.00%	2-Jan-14	25-Jan-14	Done
9		Podium-Z1	100.00%	80.00%	15-Jan-14	30-Jan-14	
10		Podium-Z2				25-Jun-14	
11	Water Tank Slab	Tower	100.00%	100.00%	5-Jan-14	2-Feb-14	Done
12	Basement Slab Structure	Tower	100.00%	100.00%	9-Jan-14	2-Feb-14	Done
13		Podium-Z1	100.00%	0.00%	22-Jan-14	8-Mar-14	
14		Podium-Z2				30-Jun-14	
15	Retaining Wall (below BF)	Podium-Z1	100.00%	80.00%	15-Jan-14	25-Jan-14	Done
16		Podium-Z2				4-Jul-14	
17	Retaining Wall (above BF)	Tower	100.00%	45.00%	18-Jan-14	8-Feb-14	
18		Podium-Z1	100.00%		29-Jan-14	26-Feb-14	
19		Podium-Z2				8-Jul-14	
20	BF Column/Wall & Core Wall	Tower	100.00%		18-Jan-14	6-Feb-14	
21		Podium	100.00%		29-Jan-14	8-Jul-14	
22	GF Core Wall	Tower	100.00%		15-Jan-14	16-Feb-14	
23		Podium	11.00%		29-Jan-14	18-Jul-14	
24	GF Slab Structure	Tower	81.00%		5-Feb-14	13-Feb-14	Delays to catch-up at 1F
25		Podium	65.00%		15-Feb-14	12-Jul-14	

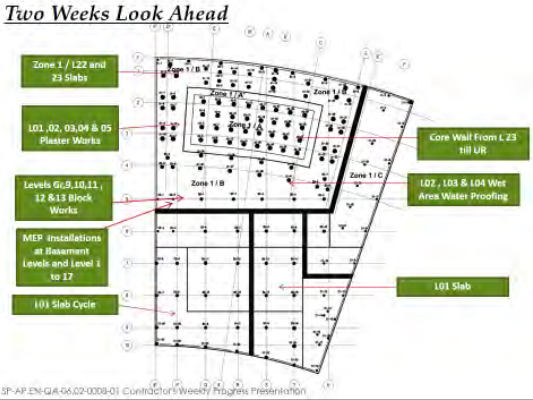
Progress Summary:

Progress Layout





Two Weeks Look Ahead



Shop Drawing Status

Structural Shop Drawings

Total No.	Planned	Actual Submitted	Approved	Revised & Resubmit	Under Review	Due & Not Submitted
1276	1276	1270	1266	4	0	6

Due & Not Submitted

Architectural Shop Drawings

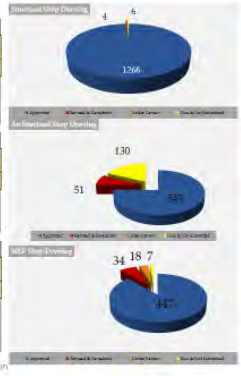
Total No.	Planned	Actual Submitted	Approved	Revised & Resubmit	Under Review	Due & Not Submitted
726	726	596	545	51	0	130

Due & not Submitted
- Ceiling Shop Drawings
- Stone Cladding

MEP Shop Drawings

Total No.	Planned	Actual Submitted	Approved	Revised & Resubmit	Under Review	Due & Not Submitted
506	506	499	447	34	18	7

Due & not Submitted



MANPOWER:

	Planned	Actual	Variance
Civil	142	134	-8
Architectural	0	1	+1
MEP	9	11	+2
TOTAL	151	146	-5

Progress Photos

OVERALL SITE VIEW.

C. Contractor's monthly progress report

Table of Contents

6.3 Comparison of retrospective delay analysis methods (practical example)

A. Project description and Baseline Programme

The project comprised construction of reinforced concrete bridge with two 18m spans, including the access roads, under the FIDIC Red Book contract. The Time for Completion was 9 months. Contractor's method of work was based on sub-contracting the access road and prefabricating the main bridge girders off-site, as to minimize the risk of delay. Execution of site works was on the critical path in the Baseline Programme (Fig. 6.3A).

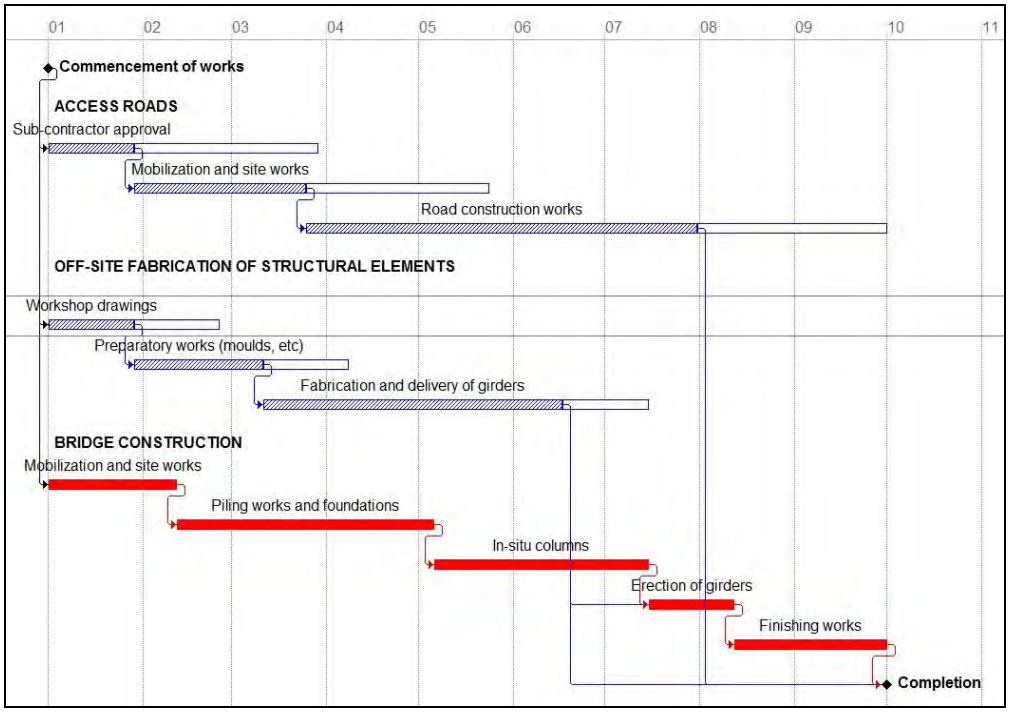


Figure 6.3A - Contractor's Baseline Programme

B. Method 1 - Window analysis

For the sake of simplicity, a window of 3 months has been assumed. At the end of Window 1 (0-3m), there were three delay events: (1) the Employer delayed access to site for 15d, which critically affected Contractor's mobilization; (2) the Contractor was 30d late in submitting sub-contractor prequalification documents, but this activity was not on the critical path; and (3) after the completion of piling works, the Engineer requested for additional soil investigation to verify sub-soil condition, and approved an extension to the Time for Completion of 15d. The total effect of delay events in Window 1 (15d + 15d = 30d) is calculated and presented on Fig. 6.3B1 below.

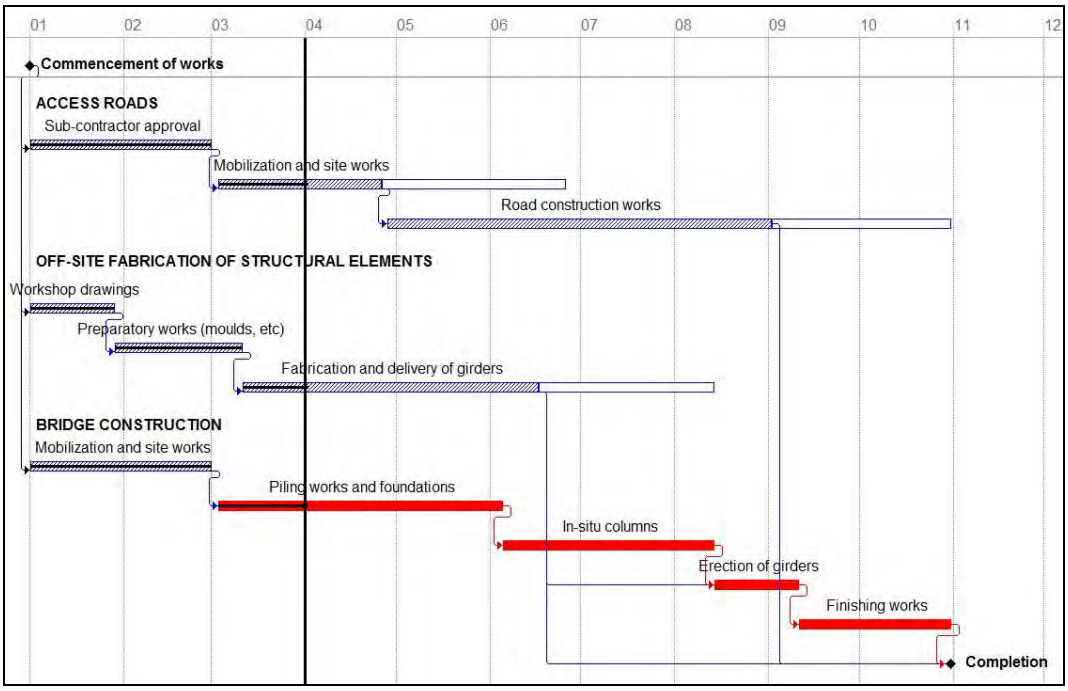


Figure 6.3B1 - Updated Programme (0-3 months)

During Window 2 (3-6m), there were two delay events: (1) the Engineer instructed a change in access road as requested by local authorities, resulting in additional works and non-critical delay (60d); (2) the Contractor himself delayed the prefabrication and delivery of bridge girders due to lack of materials (30d), but this was not on the contemporary critical path. The expected Completion Date did not change in Window 2 (Fig. 6.3B2 below).

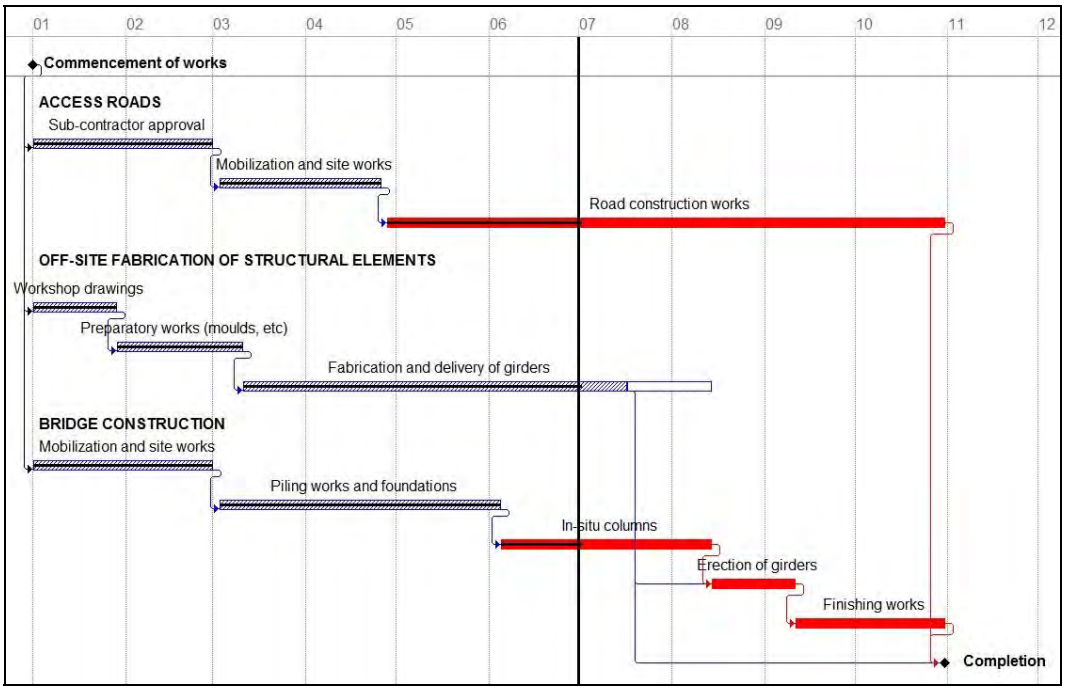


Figure 6.3B2 - Updated Programme (3-6 months)

During Window 3 (6-9m), there were no Employer's delay events, but progress reports recorded slow execution of road construction works due to lack of Contractor's resources (15d delay). This delay was on the contemporary critical path (see Fig. 6.3B3 below).

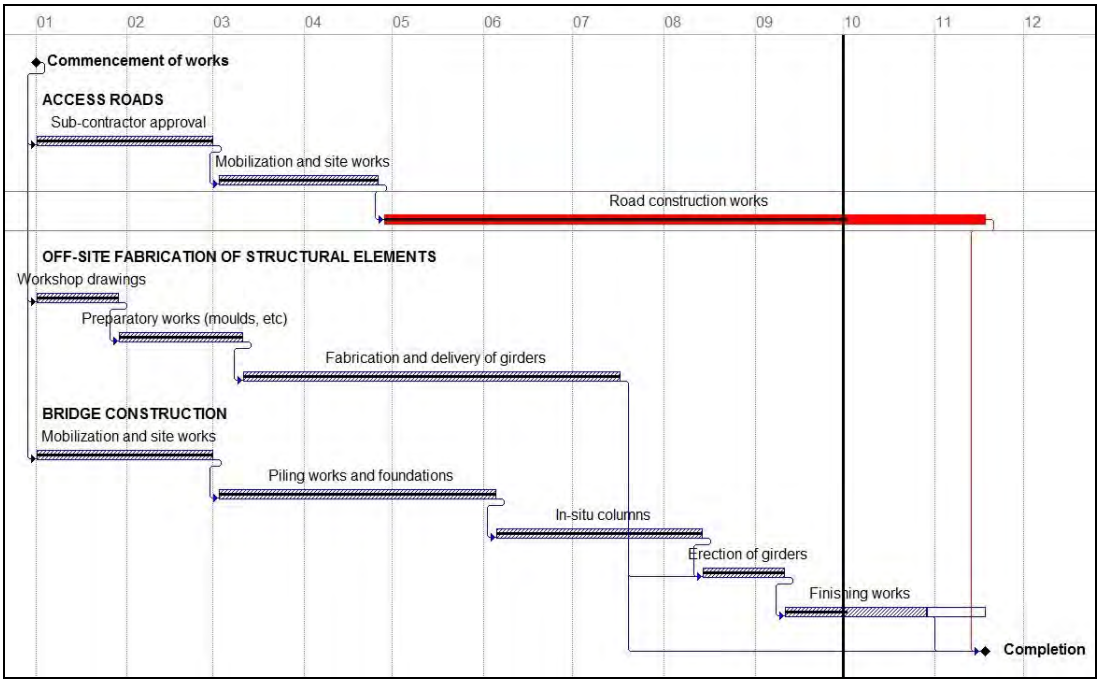


Figure 6.3B3 - Updated Programme (6-9 months)

Finally, in Window 4, there were no recorded delay events. The as-built programme is shown on Fig. 6.3B4.

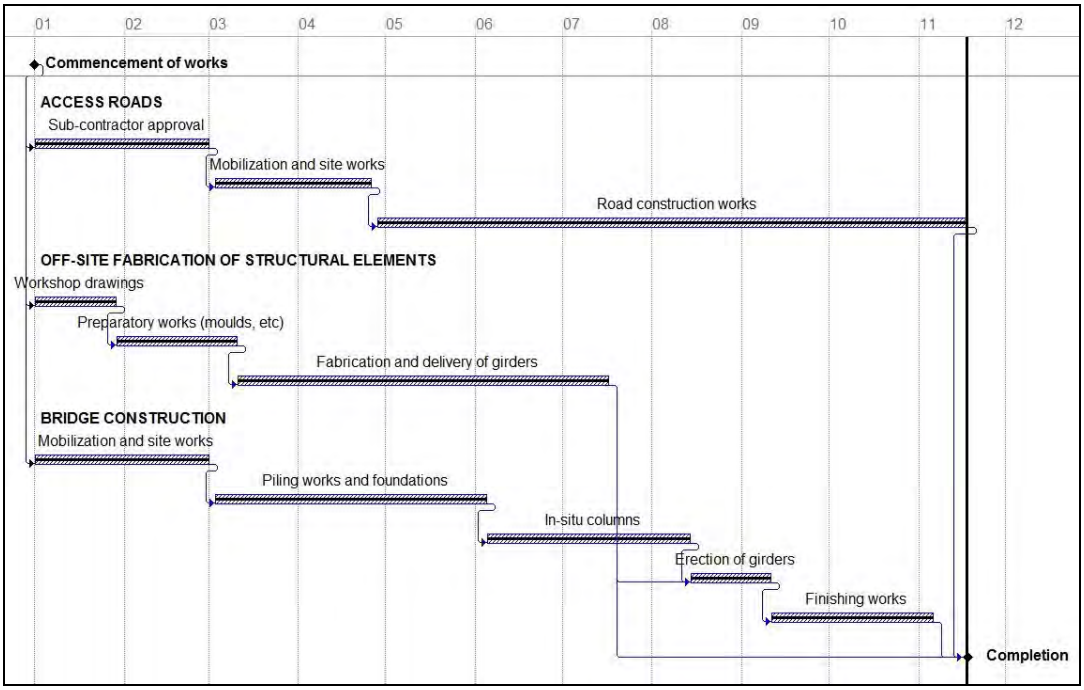


Figure 6.3B4 - Updated Programme (as-built)

The results of window analysis are summarized in the following Table 6.3(1):

Window	Delay Event	Event Duration	Responsibility	On Critical Path?	Delay Effect on Time for Completion	Approved Extension of Time
0-3m	Access to site	15d	Employer	Yes	15d	15d
	Sub-contractor submission	30d	Contractor	No	-	-
	Add. soil investigation	15d	Employer	Yes	15d	15d
3-6m	Change in access road	60d	Employer	No	-	-
	Delay in prefabrication	30d	Contractor	No	-	-
6-9m	Lack of resources on site	15d	Contractor	Yes	15d	-
As-Built	-	-	-	-	-	-
Total:					**45d**	**30d**

Table 6.3(1) - Summary of windows analysis

C. Method 2 - As-built collapsed

The as-built Programme (shown on Fig. 6.3B4 above) was used as a starting point to subtract the effects of all three Employer's delay events: (1) delay in providing access to site (15d); (2) additional soil investigation (15d); and (3) change in the route of permanent access roads to the bridge (60d). The resulting Programme on Fig. 6.3C shows that project would have been completed 38d earlier but for these Employer's delays.

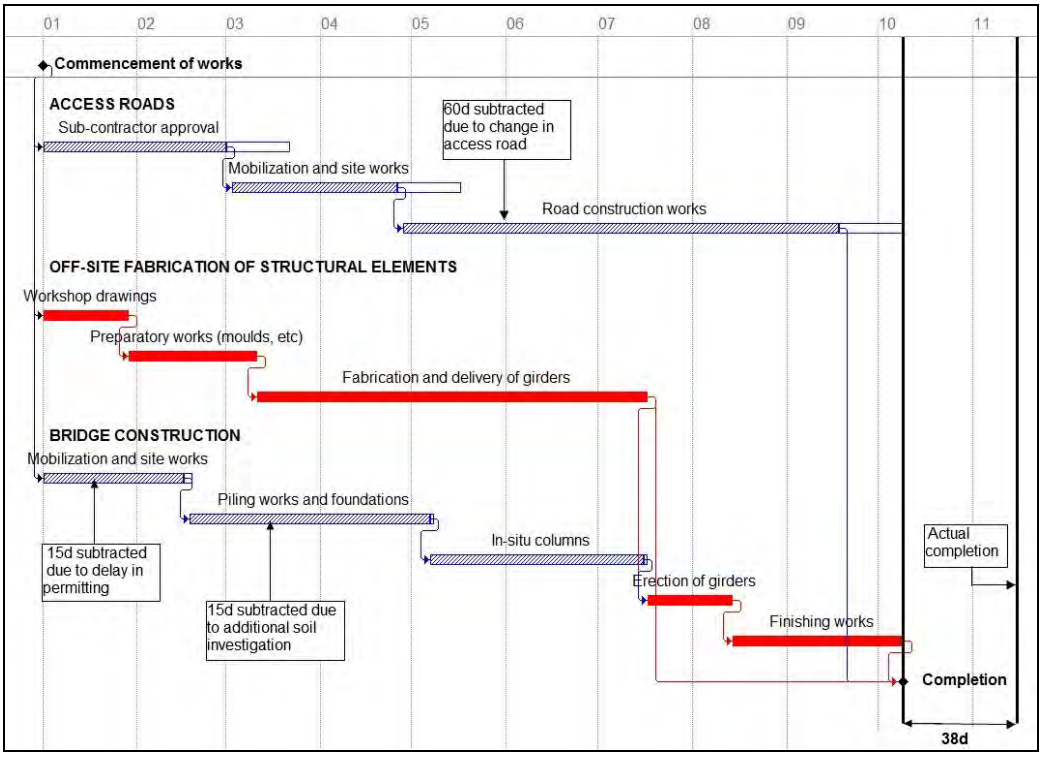


Figure 6.3C - As-built subtracted Programme

D. Method 3 - As-planned expanded

The as-planned Programme (Baseline shown on Fig. 6.3A) was impacted by the same three Employer's delay events, and the cumulative effect of these delays on the Time for Completion appeared to be 15d, as per Fig. 6.3D below.

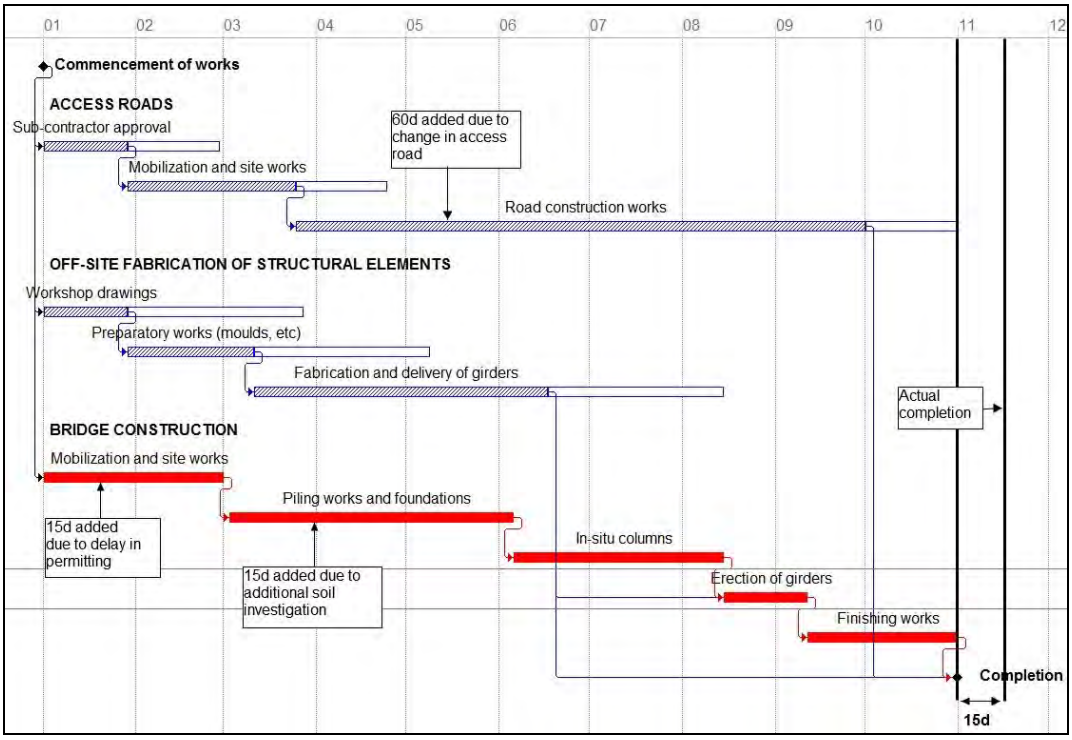


Figure 6.3D - As-planned added Programme

E. Comparison of methods and conclusion

Comparison of results shows that three delay analysis methods produced different outcomes, as summarized in Table 6.3(2) below:

Method	Total Delay	Employer's Responsibility	Contractor's Responsibility
Method 1 - WIndow analysis	45d	30d	15d
Method 2 - As-built collapsed		38d	7d
Method 3 - As-planned expanded		30d	15d

Table 6.3(2) - Summary of delay analysis using different retrospective methods

Methods 2 and 3 are inherently 'static' as they did not capture the contemporary critical path, and their results should be taken with scepticism. Method 1, window analysis, is 'dynamic' and was able to assess the 'net' effect of delay events using the actual critical path within each window, and should therefore be recommended as the first choice.

6.4 Risk register for project delay events (sample)

Risk Identification							Risk Assessment - Qualitative					Quantitative (Optional)		Risk Response							
Risk Ref. No.	**Risk Category**	**Risk Description**	**Cause**	**Impact/Effect Description** (Time, Cost, Quality, Safety)	**Risk Owner**	**Date first Reported or Input** dd/mm/yy	**Date of Last Update** dd/mm/yy	**Probability** (1-10)	**Impact** (1-10)	**Rating**	**Priority of Risk**	**Schedule Impact** - Min & Max (Cal. Days)	**Cost Impact** - Min & Max Additional Cost	**Response Strategy** (Avoid Accept Mitigate Transfer)	**Planned Response Action**	**Response Action Owner**	**Action End Date** dd/mm/yy	**Action Status**	**Action Completion Date** dd/mm/yy	**Remark**	**Risk Status** Open / Closed / Moved to Issue
Provide a unique identifier for risk	*External:* Local Authority, Master Developer, Legislation, Force Majeure, Economic *Internal:* Design, Construction, Procurement, Operation/FM	*Describe the potential risk event. A risk event is something that might happen in the future and have a possible impact on the project. "Weather" is not a description of a risk event. "Bad weather may delay the project" is a risk event statement.*	*Describe what the cause of the risk event is likely to be e.g. Due to the current high demand for this specific type of equipment the lead time for delivery could be longer than planned.*	*List the specific impact the risk could have on the project schedule, budget, scope, safety and quality. Other impacts can also be listed (e.g. impact on reputation).*	*Provide the name or title of the team member responsible for risk.*	*Enter the date the risk was first reported*	*Enter the date the risk was reviewed and updated*	*Enter the probability of the risk occurring on a scale of 1 - 10 with 1 being the minimum and 10 being the maximum.*	*Enter the likely impact of the risk on the project on a scale of 1 - 10 with 1 being the minimum and 10 being the maximum.*	*Multiply the Probability and Impact scores to obtain a rating. Traffic Light System per rating*	*Use the Excel "Data Sort" to sort the rating column from highest to lowest and number this column from 1 - n. (Note: the risk priorities could change with each review).*	*Enter the estimated max and min number of days the project could be delayed by should the risk occur.*	*Enter the estimated max and min effect on the project cost in the currency of the budget.*	*Enter one of the 4 action strategies.*	*Provide a description of the actions to respond to the risk. (Re-assessing the risk is not considered to be an action)*	*Name or title of the member responsible for the risk response action.*	*Due date by which each response action should be completed.*	*Provide a description of the status of the risk and detail actual response actions already completed.*	*Date that each response action is completed*	*Provide comments on action reviews and the outcomes thereof e.g. especially if the is a change in the proposed action or if it is not possible to carry out a particular response action.*	*State if the risk is open (still might happen and still has to be managed); closed (has passed or has been successfully mitigated); moved to issue (risk has actually occured)*
001	Local Authority	Environmental Plan for the project is not endorsed by Environmental Agency.	Environmental Plan is not included in Consultant scope.	Time/Cost: Project may be delayed because there is not an approved Environmental Plan.	Risk Owner	dd-mm-yy	dd-mm-yy	2	8	16		To Be Advised	TBA	Accept	Instruct preparation of a proper Environmental Plan.	Response Action Owner	dd-mm-yy		dd-mm-yy		Open
002	Local Authority	External Road Network is not approved by Road Department.	Department of Transportation (DOT) do not accept Consultant's alternative proposals for direct access from public road to the building.	Quality: Building will not have direct access from the public road. Time/Cost: Further alternative proposals will be required to satisfy DOT causing delay and additional costs.	Risk Owner	dd-mm-yy	dd-mm-yy	5	8	40		TBA	TBA	Mitigate	Consultant to develop sketches for alternative access to be discussed with DOT.	Response Action Owner	dd-mm-yy		dd-mm-yy		Open

Rating Scale

- Rating Less Than 30
- Rating between 31 to 70
- Rating greater than 70

This register is used to record and track project risks. Risks are things that may or may not happen in the future that could have an effect on a project's success. This register includes all risks identified over the life of the project, including those that have passed and are no longer a threat to the project, those that have been prevented or mitigated, and those that have become issues. ***No risk information should be deleted from this register*** *as it is a permanent record of project risks and how they have been managed.*

Tips:

1. The first Risk Register should be created at the earliest possible stage of the Project.
2. The title of this document should be changed by clicking "View" in the Tools Menu and selecting "Header and Footer" and then "Custom Header" and entering the Projec Name.
3. Active risks in a period should be recorded in the Project Progress Report for that period according to the thresholds for reporting risks in the Risk Management Plan.
4. Identifying new risks and updating this log should be part of an ongoing risk management process with clear roles and responsibilities. See the Risk Management Plan Template for suggestions on these.
5. Each risk should be assigned a number as a unique identifier (see left hand column) that does not change over the life of the project and that is also used on the Project Progress Report.
6. There should be specific definitions for the terms high, medium, low. See the Risk Management Procedure and Risk Management Plan Template for suggested definitions.
7. If something is already occurring, it is an issue or certain event, not a risk. All risks that have become issues should go through the issue management process and be included in the Issue Register, but as staed above do not delete them from this record. In these situations the Impact, Rating, columns become not applicable (N/A); and the Risk Status is "Moved to Issue."

Bibliography

Books

Ali Haidar and Peter Barnes, *Delay and Disruption Claims in Construction* (2nd Edition, ICE Publishing, UK, 2014)

Andrew Baldwin, David Bordoli, *A Handbook for Construction Planning and Scheduling* (Wiley Blackwell, UK, 2014)

Axel-Volkmar Jaeger, Götz-Sebastian Hök, *FIDIC – A Guide for Practitioners* (Springer-Verlag, Germany, 2010)

Brian Barr and Leo Grutters (originally by Brian Totterdill), *FIDIC Users' Guide* (ICE Publishing, UK, 2014)

Brian Morgan, *International Construction Contract Management* (RIBA Enterprises, UK, 2005)

David Chappell, *Building Contract Claims* (5th Edition, Wiley-Blackwell, UK, 2011)

David Chappell, *Construction Contracts - Q & A* (7th Edition, Taylor & Francis, UK, 2006)

Edward Corbett, *FIDIC 4th Edition – A Practical Legal Guide* (Sweet & Maxwell, UK, 1993 Supplement)

Essam Al Tamimi, *Practical Guide to Litigation and Arbitration in the United Arab Emirates* (Kluwer Law International, UK, 2003)

Ewan McKendrick, *Contract Law – Text, Cases and Materials* (5th edition, Oxford University Press, 2012)

Harold Kerzner, *Project Management Metrics, KPIs, and Dashboards - A Guide to Measuring and Monitoring Project Performance* (John Wiley & Sons and International Institute for Learning, USA, 2011)

Jane Jenkins, *International Construction Arbitration Law* (2nd Edition, Kluwer Law International BV, The Netherlands, 2014)

John Murdoch, Will Hughes, *Construction Contracts – Law and Management* (4th edition, Taylor & Francis, UK, 2008)

John Uff, *Construction Law* (11th edition, Sweet & Maxwell, UK, 2013)

Keith Pickavance, *Delay and Disruption in Construction Contracts* (3rd Edition, LLP Professional Publishing, London-Singapore, 2005)

MacRoberts Solicitors, *MacRoberts on Scottish Building Contracts* (2nd edition, Blackwell Publishing, UK, 2008)

Michael D Robinson, *A Contractor's Guide to the FIDIC Conditions of Contract* (Wiley-Blackwell, UK, 2011)

Michael D Robinson, *An Employer's and Engineer's Guide to the FIDIC Conditions of Contract* (Wiley-Blackwell, UK, 2013)

Nael Bunni, *The FIDIC Forms of Contract* (3rd edition, Blackwell Publishing, UK, 2005)

Reg Thomas, *Construction Contract Claims* (2nd Edition, Palgrave, UK, 2001)

Richard Stone, *The Modern Law of Contract* (9th Edition, Routledge, UK, 2011)

Roger Knowles, *200 Contractual Problems and their Solutions* (3rd edition, Willey-Blackwell, UK, 2012)

Robert F Cushman, John D Carter, Paul J Gorman, Douglas F Coppi, *Proving and Pricing Construction Claims* (3rd Edition, Aspen Publishers, New York, 2001)

Roger Gibson, *Construction Delays – Extensions of Time and Prolongation Claims* (Taylor & Francis, UK, 2008)

Industry Standards, Guides and Reports

International Comparative Legal Guides (ICGL), *United Arab Emirates – Construction & Engineering Law 2014*, by Adam Balchin and Euan Lloyd, Al Tamimi & Company, 2014, <http://www.iclg.co.uk/practice-areas/construction-and-engineering-law/construction-and-engineering-law-2014/united-arab-emirates> accessed 14-02-2015

AECOM, *Middle East Construction Handbook 2013* (Bahrein, Egypt, KSA, Kuwait, Lebanon, Oman, Qatar, UAE)

Chartered Institute of Building (CIOB), *Managing the Risk of Delayed Completion in the 21st Century*, Research and professional guidance published in 2009, available at <http://www.ciob.org/sites/default/files/CIOB%20research%20-%20Managing%20the%20Risk%20of%20Delayed%20Completion%20in%20the%2021st%20century.pdf > accessed 03-01-2015

Chartered Institute of Building (CIOB), *Claims for head office overheads and profit in the construction industry*, by John W Pettet, Professional Services of CIOB, UK, 1998

Denton Wilde Sapte, *Construction Law UAE*, First Edition 2006

EC Harris, *Global Construction Disputes: A Longer Resolution*, Report published in 2013, <http://www.echarris.com/pdf/EC%20Harris%20Construction%20Disputes%202013Final.pdf> accessed 04-08-2014

FIDIC, *The FIDIC Contracts Guide – 1999 Conditions for Construction, Plant & DB and EPC/T* (1st Edition, 2000)

FIDIC, *The FIDIC Contracts Guide Supplement - Conditions of Contract for Construction*, (1st Edition amended 2006)

Herbert Smith Freehills, *Guide to dispute resolution in the Middle East*, Guide by Herbert Smith in association with the Al Ghazzawi Professional Association, 2011, available at <http://www.ghazzawilawfirm.com> accessed on 04-08-2014

Institution of Civil Engineers (ICE), *ICE Manual of Construction Law* (Thomas Telford, UK, 2011)

Law Business Research, *The project and construction review,* 1st Edition, London, 2011, Julio Cesar Bueno (Editor)*, Chapter 25 – United Arab Emirates* by Leonora Riesenburg, Galadari & Associates, Dubai

Project Management Institute, *Practice Standard for Scheduling,* 2nd Edition, PMI, USA, 2011

Project Management Institute, *Practice Standard for Work Breakdown Structures*, 2nd Edition, PMI, USA, 2006

Project Management Institute, *Practice Standard for Project Risk Management*, PMI, USA, 2009

Society of Construction Law (SCL), *Delay and Disruption Protocol,* October 2002, reprinted October 2004, available at <http://www.scl.org.uk/resources> accessed 26-07-2014

Royal Institution of British Architects (RIBA), *Good Practice Guide: Assessing Loss and Expense* (RIBA Publishing, UK, 2013)

Royal Institution of British Architects (RIBA), *Good Practice Guide: Extensions of Time* (RIBA Publishing, UK, 2008)

Royal Institution of Chartered Surveyors (RICS), *Extensions of Time* (1st Edition, RICS Professional Guidance Note, UK, 2014)

Royal Institution of Chartered Surveyors (RICS), *Damages for delay to completion* (1st Edition, RICS Professional Guidance Note, UK, 2014)

Papers and Articles

Abdurrahman Yousef Rahhal, *Entitlement to Extension of Time in cases of Concurrent Delays under the UAE Law*, MSc Dissertation, Faculty of Construction Law and Dispute Resolution, The British University of Dubai, UAE, June 2013

Alan Lundie, *Standard Forms: A Solution for Effective management of Time & Delay*, Dissertation LLM/MSc Construction Law and Arbitration, Robert Gordon University, Scotland, 2014

Andrew Tweeddale, *FIDIC's clause 20 – a common law view,* Construction Law International, Volume I No 2, June 2006, available at <http://corbett.co.uk/wp-content/uploads/FIDIC-Clause-20-a-common-law-view.pdf> accessed 12-08-2014

Antonios Dimitracopoulos, *Construction contracting in the Middle East: regional departures from international practices,* Construction Law International, Volume 3 No 1 March 2008, Bin Shabib & Associates (BSA) LLP, Dubai, available at http://www.bsa.ae/pdf/construction_law_international.pdf accessed 01-08-2014

Arun Bajracharya and Mohammad Halloum, *Cost and Time Overrun Revisited: A Study on the Infrastructure Construction Projects in Abu Dhabi - UAE,* Third International Conference on Construction in Developing Countries (ICCIDC–III) "Advancing Civil, Architectural and Construction Engineering & Management", July 4-6, 2012, Bangkok, Thailand

Christopher Seppala, *International construction contract disputes: commentary on ICC awards dealing with the FIDIC International Conditions of Contract*, The International Court of Arbitration, Bulletin Vol. 9 No 2, November 1998

Christopher Seppala, *International construction contract disputes: Fourth commentary on ICC awards dealing with the FIDIC International Conditions of Contract*, The International Court of Arbitration, Bulletin Vol. 23 No 2, 2012

Christopher Seppala, *International construction contract disputes: Fourth commentary on ICC awards dealing with the FIDIC International Conditions of Contract*, The International Court of Arbitration, Bulletin Vol. 24 No 2, 2013

Christopher Seppala, *Contractor's claims under the FIDIC contracts for major works,* International ICC-FIDIC Conference 'Construction Contracts and Dispute Resolution', Cairo, Egypt, April 9-10, 2005

Christopher Seppala, Contractor's claims under the FIDIC civil engineering contract, Fourth (1987) Edition, International Business Law Journal, 1991

Chris Wade, *Claims of Employer,* International ICC-FIDIC Conference 'Construction Contracts and Dispute Resolution', Cairo, Egypt, April 9-10, 2005

CIOB and Hill International, *Masterclass – Manage, Analyse and Avoid Construction Delay & Disruption in a Changing Economic Climate*, Proceedings from a two-day seminar led by Keith Pickavance, Abu Dhabi, UAE, 2-3 June 2009

Cornerstone Seminars, *FIDIC Claims - Managing, Defending and Making Claims under FIDIC Contracts*, Proceedings from a two-day specialized FIDIC workshop led by Edward Corbett and David Richards, Abu Dhabi, UAE, 24-25 May 2011

Daniel Brawn, *Extensions of time and liquidated damages in construction contracts in England and Wales*, International Journal of Law in the Built Environment, Vol. 4 Issue 1, 2012, pp 75-90

Derek Nelson, *The Analysis and Valuation of Disruption,* Publication of Hill International, Inc, 25 January 2011

Derek Nelson, *What is Constructive about Acceleration,* Publication of Hill International, Inc, April 2013

ECV Limited, *The Practical Use of the 1999 FIDIC Conditions of Contract under the 1999 FIDIC Contracts and Aide Mémoire on the Multi-lateral Development Banks' Harmonised Construction Contract 2006 and the 2007 Abu Dhabi Government Conditions of Contract*, Proceedings from a two-day specialized FIDIC seminar led by Brian W Totterdill, Abu Dhabi, UAE, 22-23 March 2010

ECV Limited, *The Practical Management of Contract Claims and the Resolution of Disputes under the 1999 FIDIC Contracts and the 2007 Abu Dhabi Government Conditions of Contract*, Proceedings from a two-day specialized FIDIC seminar led by David Heslett and Brian W Totterdill, Abu Dhabi, UAE, 21-22 April 2008

Edward Corbett**,** *Notes from the FIDIC Users' Conference, London, December 2010*, Construction Law International, Volume 6 Issue 1 March 2011, available at IBA Web Site <http://www.ibanet.org/Article/Detail.aspx?ArticleUid=216f976a-1ae6-49c5-85ce-45dc01f5eb91#7> accessed 23-04-2014

Ellis Baker and Anthony Lavers, *Variations and claims procedure: practical issues,* Society of Construction Law (SCL) Seminar, Dubai, UAE, March 2011

Franco Mastrandrea, *Concurrent Causation in Construction Claims,* The International Construction Law Review, Volume 26, Part 1, January 2009

Geoffrey M Veitch, *Liquidated Damages: An Exhaustive Remedy in Construction Law?*, Dissertation LLM/MSc Construction Law and Arbitration, Robert Gordon University, Scotland, 2010

Iryna Akulenka, *The Users' Perceptions on the Impartiality of the Engineer under the FIDIC Red Book in the UAE*, Dissertation MSc Construction Law and Dispute Resolution, Faculty of Business, The British University of Dubai, UAE, November 2013

James R Knowles (Middle East), *Proceedings from the Training Course for Delay Analysis*, Presented by Coling Smith, Dubai, UAE, 23 September 2002

Michael R Finke, *Window Analysis of Compensable Delays,* Journal of Construction Engineering and Management, March/April 1999, pp 96-100

Mohamed Shafik, *UAE Construction Law: A UK Perspective on Payment and Liabilities,* Dissertation LLM Construction Law and Practice, University of Salford, School of the Built Environment, UK, 2010

Nael Maher Zubaida, *Claims Management and Substantiation in the UAE Construction Sector,* Dissertation MSc Project Management, Faculty of Business, The British University of Dubai, May 2012

Nuhu Braimah, *Approaches to Delay Claims Assessment Employed in the UK Construction Industry*, Civil Engineering Department, School of Engineering and Design, Brunel University, UK, Article in Buildings 2013, 3, 598-620, 11 September 2013

Nuhu Braimah, *Construction Delay Analysis Techniques—A Review of Application Issues and Improvement Needs*, Civil Engineering Department, School of Engineering and Design, Brunel University, UK, Article in Buildings 2013, *3*, 506-531, 23 July 2013

Essam K. Zaneldin, *Construction claims in United Arab Emirates: Types, causes, and frequency,* Elsevier International Journal of Project Management 24 (2006) 453–459

Omayma Motaleb and Mohammed Kishk, *An investigation into causes and effects of construction delays in UAE*, Egbu, C. (Ed) *Proceedings 26th Annual ARCOM Conference,* 6-8 September 2010, Leeds, UK, Association of Researchers in Construction Management, 1149-1157

Paul David Baines, *Would a common law right to apportion liability in contract facilitate justice in concurrent delay disputes*, Dissertation MSc Construction Law and Arbitration, Leeds Metropolitan University, UK, July 2007

Saad Hegazy, *Delay Analysis Methodology in UAE Construction Projects: Delay Claims*, Literature Review, PM World Journal, Volume I Issue II, September 2012

Saied Kartam, *Generic Methodology for Analysing Delay Claims*, Journal of Construction Engineering and Management, November/December 1999, pp 409-419

Saleh Majid, *Application of Islamic Law in the Middle East,* International Construction Law Review, Volume 20 January 2003

Shaikh Asif Abdus Saeed, *Delay to Projects – Cause, Effect and Measures to Reduce/Eliminate Delay by Mitigation/Acceleration,* Dissertation MSc Project Management, Institution of Business, The British University of Dubai, August 2009

Fraser Van Nuil, *Disruption in Construction Contracts*, Dissertation LLM/MSc Construction Law and Arbitration, Robert Gordon University, Scotland, 2010

Oon Chee Kheng, *Extension of Time and Liquidated Damages in Construction Contracts, Seminar on* Construction Contracts and Arbitration organized by The Institution of Engineers, Malaysia, 18 October 2003

Paul Gallagher, *Concurrent Delay – On the road to Apportionment. Which way now?,* Dissertation LLM/MSc Construction Law and Arbitration, Robert Gordon University, Scotland, 2014

Patrick Mc Oscar, *Delay and Disruption Claims - 'A Risky Enterprise' In Construction Contracts*, Dissertation LLM/MSc Construction Law and Arbitration, Robert Gordon University, Scotland, 2010

Roger Knowles, *Contracts law and time extension,* Gulf Construction - UAE Focus, October 2002, <http://www.eotprotocol.com/pdfs/gulfconstr0210.pdf> accessed 10-08-2014

Stuart Peter Thomson, *The Provision of Delay Analysis Clauses in Standard Forms of Construction Contracts – Adopting The Protocol*, LLM/MSc Construction Law and Arbitration, Robert Gordon University, Scotland, 2013

Winter J., '*How Should Delay be Analysed – Dominant Cause and its Relevance to Concurrent Delay',* SCL Paper 153, January 2009

Internet Sources

Al Tamimi & Co, UAE, *Law Updates*, <http://www.tamimi.com>:

Dealing with concurrency in construction delay claims, by Dean O'Leary, April 2014, <http://www.tamimi.com/en/magazine/law-update/section-8/april-7/dealing-with-concurrency-in-construction-delay-claims.html> accessed 05-08-2014

The Middle East, construction and the law, by Adam Balchin, February 2013, <http://www.tamimi.com/en/magazine/law-update/section-5/february-4/the-middle-east-construction-and-the-law-1.html> accessed 05-08-2014

Contractors' exposure to delay damages under Qatari law, by Sarah Kelly, June 2013, <http://www.tamimi.com/en/magazine/law-update/section-5/june-issue/contractors-exposure-to-delay-damages-under-qatari-law.html> accessed 05-08-2014

Exclusive remedies clauses: UAE law and the common law, by Euan Lloyd, May 2013, <http://www.tamimi.com/en/magazine/law-update/section-5/may-5/exclusive-remedies-clauses-uae-law-and-the-common-law.html> accessed 05-08-2014

The interpretation of contracts under the UAE Civil Code, by by Abobakr Dafalla, January 2014, <http://www.tamimi.com/en/magazine/law-update/section-8/december-january-1/the-interpretation-of-contracts-under-the-uae-civil-code.html> accessed 05-08-2014

Liquidated damages in the DIFC courts, by Tarek Shrayh, March 2014, <http://www.tamimi.com/en/magazine/law-update/section-8/march-7/liquidated-damages-in-the-difc-courts.html> accessed 05-08-2014

Liquidated damages – the bigger picture, by Faisal Attia, March 2012, <http://www.tamimi.com/en/magazine/law-update/section-6/march-5/liquidated-damages-the-bigger-picture.html> accessed 05-08-2014

Can we really limit liability, by Faisal Attia, November 2012, <http://www.tamimi.com/en/magazine/law-update/section-6/november-3/can-we-really-limit-liability.html> accessed 05-08-2014

Prevention is better than cure for building defects in the UAE, by Niall Clancy, April 2014, <http://www.tamimi.com/en/magazine/law-update/section-8/april-7/prevention-is-better-than-cure-for-building-defects-in-the-uae.html> accessed 06-02-2015

UAE & Chinese Construction Law (Part I and II), by Eric Teo, July 2011, <http://www.tamimi.com/en/magazine/law-update/section-7/july-2/uae-chinese-construction-law.html> and September 2011, <http://www.tamimi.com/en/magazine/law-update/section-7/august-september-1/highlights-of-the-laws-of-the-united-arab-emirates-the-peoples-republic-of-china-and-the-common-law.html> accessed 05-08-2014

Andy Hewitt, *FIDIC Middle East Contract User's Conference 2013*, Blog dated 28 February 2013 about confirmed changes to be implemented in the future FIDIC contract forms, <http://constructionclaimsclass.com/fidic-middle-east-contract-users-conference-2013/> accessed 03-08-2014

Chris Larkin, *Who owns the float period?,* Discussion in Construction Week, UAE, 23 May 2007, <http://www.arabianbusiness.com/who-owns-float-period--144649.html> accessed 03-08-2014

Chris Larkin, *Constructive acceleration demands clear intentions,* Construction Week, UAE, 10 March 2007, <http://www.arabianbusiness.com/constructive-acceleration-demands-clear-intentions-148100.htm> accessed 06-02-2015

Claire King, *Good Faith: English Law v the UAE Civil Code,* Fenwick Elliott, International Quarterly, Issue 12, 2014, <http://www.fenwickelliott.com/files/issue_12_-_iq_2014.pdf> accessed 14-02-2015

Daniel Atkinson, *Delay and Disruption - Reducing Delays,* 22 November 2012, <http://www.atkinson-law.com/library/article.php?id=148> accessed 06-02-2015David Savage, *The top 10 things you need to know about FIDIC*, Charles Russell LLP – Bahrein, June 2011, <http://www.charlesrussell.co.uk/userfiles/file/pdf/Bahrain/FIDIC.pdf> accessed 06-08-2014

Dubai Court of Cassation Judgment 138/1994, *Commentary* <http://www.constructionweekonline.com/article-324-how-does-local-law-deal-with-liquidated-damages/#.U1VtoGeKDug> accessed 22-08-2014

Fenwick Elliott LLP, London, Contract Papers <http://www.fenwickelliott.com>:

Liquidated damages under UAE and UK law: a comparison, Annual Review 2013/2014, October 2013, <http://www.fenwickelliott.com/research-insight/annual-review/2013/liquidated-damages-uae-uk-law-comparison> accessed on 29-07-2014

Time, delay and liquidated damages, by Nicholas Gould, September 2011, <http://www.fenwickelliott.com/time-delay-and-liquidated-damages> accessed 15-08-2014

UAE - Civil Code: Suspension and Termination of Construction Contracts, by Nicholas Gould, December 2012, <http://www.fenwickelliott.com/files/nick_gould_-_uae_-_civil_code_-_suspension_and_termination_of_construction_contracts.pdf> accessed 15-08-2014

Time and Money: Time Bar Clauses, paper presented at FIDIC Contract Conference 2007 by Nicholas Gould, October 2007, <http://www.fenwickelliott.com/files/Contract%2018%20-%20Time%20Bar%20Clauses.pdf> accessed 15-08-2014

Can you imply good faith into agreements made under English Law, by Jeremy Glover, Issue 05, March 2013, <http://www.fenwickelliott.com/files/jeremy_glover_-_issue_05_-_iq_2013_-_good_faith.indd_.pdf> accessed 15-08-2014

Legal issues surrounding Building Information Modelling (BIM), by Jeremy Glover, November 2012, <http://www.fenwickelliott.com/files/jeremy_glover_iq_-_legal_issues_surrounding_building_information_modelling_bim.pdf> accessed 15-08-2014

FIDIC: An overview of the latest developments, comparisons, claims and force majeure, by Jeremy Glover, 2007, <http://www.fenwickelliott.com/files/Arbitration%207%20-%20FIDIC%20an%20overview.pdf> accessed 15-08-2014

FIDIC, *Contracts: basic questions and answers*, Guidance for FIDIC users, <http://fidic.org/node/911> accessed 16-08-2014

Götz-Sebastian Hök, *FIDIC Claim Management,* 2014, <http://www.dr-hoek.de/EN/beitrag.asp?t=FIDIC-Claim-Management> accessed 11-08-2014

Howard L Stovall, *Arbitration and the Arab Middle East: some thoughts from a commercial lawyer,* 2009, <http://www.stovall-law.com/images/Arbitration_in_the_Arab_Middle_East.pdf> accessed 20-08-2014

Joanne Emerson Taqi and James Kay - *Norton Rose Fulbright (Middle East) LLP Bahrain office, Comparing construction laws - Comparison of the common and local laws in construction agreements*, Gulf Construction, 1 May 2014, <http://www.gulfconstructionworldwide.com/news/159946_Comparing-construction-laws.html> accessed 12-08-2014

Kennedys, *Concurrency in delay claims,* <http://www.cila.co.uk/files/Construction/Kennedys/Concurrency%20Talk.pdf> accessed 09-01-2015

Mark Tiggeman and David Toscano, *Concurrency in Delay Claims*, Kennedys Law LLP and The Chartered Institute of Loss Adjusters, <http://www.cila.co.uk/publication/technical-papers/concurrency-delay-claims-mark-tiggeman-and-david-toscano> accessed 01-08-2014

Michael Kerr, Dean Ryburn, Beau McLaren and Zehra Or Dentons, *Construction and projects in United Arab Emirates: Overview, Thomson Reuters Multi-Jurisdictional Guide 2013/14 - Construction and projects law*, available at <http://uk.practicallaw.com/1-519-3663?service=construction> accessed 29-07-2014

Michelle Nelson, *FIDIC 1999 or something else in disguise?,* Construction Week, 30 June 2007, <http://www.arabianbusiness.com/fidic-1999-something-else-in-disguise--58481.html> accessed 28-07-2014

Mosaic Project Services Pty Ltd, *A Guide to Scheduling Good Practice:* <http://www.mosaicprojects.com.au/PDF/Good_Scheduling_Practice.pdf> accessed 11-08-2014

Nicholas Gould, *United Kingdom: Making a claim under the FIDIC form of contract. What Is Clause 20 all about?*, sponsored by Fenwick Elliott, 2007, <http://www.mondaq.com/x/54934/Building+Construction/Making+A+Claim+Under+The+FIDIC+Form+Of+Contract+What+Is+Clause+20+All+About> accessed 01-08-2014

Nicola Caley, *Why does an extension of time not automatically entitle a contractor to prolongation costs*, Hill International Newsletter, Volume IV, Issue No 3, 2013, <http://www.slideshare.net/runawaytrain/why-does-an-eot-not-automatically-entitle-a-contractor-to-prolongation-costs-vol-iv-issue-no3> accessed 01-08-2014

Owen Delaney, *UAE: When International Standards Meet Local Laws,* 27 October 2011, < http://www.mondaq.com/x/150738/Contracts+Deeds/When+International+Standards+Meet+Local+Laws+Part+1+Construction+Contracts+In+The+UAE+And+Middle+East> accessed 07-02-2015

Sachin Kerur, Pinsent Masons Gulf Region, *Record what happened, when it happened – the importance of 'contemporary records',* and response from Roger Gibson, see *<http://kluwerconstructionblog.com/2010/06/08/record-what-happened-when-it-happened-%E2%80%93-the-importance-of-contemporary-records/>* accessed 07-01-2015

Saleh Majid, *Application Of Islamic Law In The Middle East*, Article published in the International Construction Law Review, Volume 20, January 2003, available at <http://www.mondaq.com/x/52976/international+trade+investment/Application+Of+Islamic+Law+In+The+Middle+East> accessed 06-08-2014

Shahram Safai, *Construction Law – UAE*, Lawyer Monthly, March 2012, available at <www.lawyer-monthly.com> accessed 04-08-2014

Raid Abu-Manneh, *Contracting in the Middle East,* Construction & Engineering Legal Update, Issue 57 December 2008, published by Mayer Brown, <http://www.mayerbrown.com/publications/Construction-amp-Engineering-Legal-Update-12-18-2008/> accessed 25-07-2014

Thierry Linares, *How to Properly Use Global Claims in Disputes*, Expert's Corner Paper 2013-03, <http://www.projectvaluedelivery.com/expert/PVD_Expert_2013-03_Global_Claims_v0.pdf> accessed 03-08-2014

UAE Society of Engineers, *The legal effect of condition precedent described in Clause 20(1) of FIDIC 1999 in the context of England and UAE Courts*, by Mahmoud Bader, <http://www.uaesocietyofengineers.com/magazineCurrentIssuemore.aspx?id=112> accessed 30-07-2014

Vinson & Elkins, *Middle East Legal Insights - When International Standards Meet Local Laws Part 2: Construction Contracts in the UAE and the Middle East*, prepared by Vinson & Elkins' International Construction Practice in Abu Dhabi, 2013, <http://www.velaw.com/uploadedFiles/VEsite/Resources/MiddleEastLegalInsightsJanuary2013.pdf> accessed 03-08-2014