BEST ENDEAVOURS FOR GRANTING AN EXTENSION OF TIME IN CONSTRUCTION CONTRACT

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DEDICATION

For my beloved father, mum, sisters and brother
Rasid Sadiran
Norizan Zainal
Nor Azura Rasid

Nor Hafiza Rasid

Mohamad Shafiq Rasid

ACKNOWLEDGEMENT

With the name of Allah who gave me the chance, ideas and physical strength in preparing this master's project report. Without His guidance and blessing, it would have been more difficult task for me.

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In this holy month of Ramadhan, I wish may Allah always bless you all.

Amin.

ABSTRACT

Extension of time is a remedy for contractor due to delay caused by employer or neutral event. One of the normal conditions that a contractor needs to fulfil in an application for the extension of time is that he must have used his best endeavours to reduce or prevent the delay. It is in fact a condition precedent for the granting of extension of time. Best endeavours can be defined as best efforts. This phrase is not a particularly unique and exclusively found in construction contracts. It is also being included in other types of contracts. However, in practice, there is no evidence at all that contract administrator addresses this requirement when considering contractor's application for extension of time. This is evidenced by the nonavailability of Malaysian case law on this issue. In the United Kingdom, there is only one case that is relevant on this point. Therefore this research is carried out to identify the extent of the contractor's duty to prevent or reduce delay under the best endeavours standard of duty. This is basically a descriptive research and the methodology used is essentially based on case law analysis and review. The cases are retrieved from the Lexis Malaysia online database. Many of them are not construction contract cases but the principles are equally applicable to extension of time. The analysis revealed that, for the purpose of fulfilling the best endeavours requirement, the contractor principally needs to carry out all possible steps to reduce delay and comply with all contract administrator's instructions relating to it. However, the contractor is not required to incur substantial amount of money for that purpose and need not sacrifice his own interest.

ABSTRAK

Lanjutan masa adalah remedi bagi pihak kontraktor jika terdapat kelewatan yang disebabkan oleh pihak klien atau keadaan semulajadi. Salah satu syarat dalam membenarkan kontraktor untuk diberikan lanjutan masa adalah kontraktor tersebut perlu membuktikan bahawa beliau telah melakukan best endeavours untuk menghalang atau mengurangkan implikasi daripada kelewatan tersebut. Malah, ia merupakan satu syarat sebelum lanjutan masa diberikan. Best endeavours boleh didefinisikan sebagai usaha yang terbaik. Istilah ini bukan sesuatu yang unik di dalam kontrak pembinaan. Ia juga sering digunakan di dalam pelbagai jenis kontrak yang lain. Walau bagaimanapun, secara praktiknya, tiada bukti yang menyatakan pentadbir kontrak mengutarakan isu ini dalam menguruskan permohonan lanjutan masa. Ia dikukuhkan lagi dengan ketiadaan kes undang-undang dari Malaysia berkaitan isu tersebut. Di United Kingdom, hanya terdapat satu kes sahaja yang relevan bagi isu ini. Oleh yang demikian, kajian ini dijalankan bagi mengenal pasti sejauh mana tugas seorang kontraktor dalam mengurangkan atau menghindar kelewatan di bawah tanggungjawab bagi melaksanakan best endeavours. Kajian ini adalah analisis deskriptif dan metodologi yang digunakan ialah berdasarkan analisis kes undang-undang. Semua kes tersebut diperolehi daripada pangkalan data Lexis Malaysia. Kebanyakan daripada kes ini bukan terdiri daripada kontrak pembinaan, tetapi prinsipnya telah diterapkan dan boleh diaplikasi dalam isu lanjutan masa. Hasil kajian mendapati bahawa bagi memenuhi tugas best endeavours, kontraktor hendaklah mengambil semua langkah yang sewajarnya untuk mengatasi kelewatan tersebut, dan perlu patuh kepada semua arahan pentadbir kontrak. Walau bagaimanapun, kontraktor tersebut tidak perlu untuk menanggung sejumlah wang yang besar dan tidak perlu mengorbankan kehendak mereka dalam melaksanakan tanggungjawab tersebut.

TABLE OF CONTENT

CHAPTER	TITLE	PAGE
	SUPERVISOR'S DECLARATION	
	TITLE	i
	DECLARATION	ii
	DEDICATION	iii
	ACKNOWLEDGEMENT	iv
	ABSTRAK	v
	ABSTRACT	vi
	TABLE OF CONTENT	vii
	LIST OF ABBREVIATION	xi
	LIST OF CASES	xiii
1.0 INT	RODUCTION	
1.1	Research Background	1
1.2	Problem Statement	5
1.3	Objectives of Research	7
1.4	Scope of Research	8
1.5	Significance of Research	8
1.6	Research Methodology	
	1.6.1 Initial Study	9

		1.6.2 Data Collection	9
		1.6.3 Data Analysis	10
		1.6.4 Conclusion and Recommendation	10
	1.7	Research Flow Process	11
2.0	EXT	ENSION OF TIME	
	2.1	Introduction	12
	2.2	Purpose of Extension of Time Provision	13
	2.3	Extension of Time Provision	17
	2.4	Relevant Events	
		2.4.1 Force Majeure	22
		2.4.2 Failure to Provide Access	23
		2.4.3 Late Posession of Site	24
		2.4.4 Excessive Change Orders	25
		2.4.5 Delay in Issuing Drawings and Instructions	27
	2.5	Requirement for Granting Extension of Time	28
	2.6	Burden of Proof	28
	2.7	Duties of Contract Administrator	29
	2.8	Time for Granting Extensions	31
	2.9	Summary	33
3.0	BES	T ENDEAVOURS	
	3.1	Introduction	35
	3.2	Principles of Mitigation	37
	3.3	Definition of Best Endeavours	39
	3.4	Standard of Duty to Reduce Delay	
		3.4.1 Best Endeavours and Absolute Duty	41

	3.4.2	Best Endeavours and Reasonable Endeavours	42
	3.4.3	Best Endeavours and Mitigation	44
3.5	Contra	actual Provisions	46
3.6	Summ	nary	48
AN	ALYSIS (OF CASES FOR REQUIREMENT OF "BEST END	EAVOURS" IN
		IG DELAYS	
4.1	Introd	uction	
	4.1.1	Planning Permission	50
	4.1.2	Sale and Purchase of Shares	50
	4.1.3	Defective Works	51
4.2	Analy	sis of Relevant Cases – Planning Permission	
	4.2.1	IBM UK Ltd v Rockware Glass [1980] FSR 335	53
	4.2.2	Obagi v Stanborough (Developments) Ltd [1993]	
		EGCS 205	55
	4.2.3	Yewbelle and Knightsbridge Green Ltd. v. London Gr	reen Developments
		[2006] EWHC 3166	58
4.3	Analy	sis of Relevant Cases – Sale and Purchase of Shares	
	4.3.1	Rackham & Anor. v. Peek Foods Ltd & Ors [1990]	
		BCLC 895	60
	4.3.2	Rhodia International Holdings Ltd v Huntsman	
		International LLC [2007] EWHC 292	63
4.4	Analy	sis of Relevant Cases – Defective Works	
	4.4.1	Terrell v Mabie Todd & Co. Ltd. [1952] WN 434	67
	4.4.2	Midland Land Reclamation Ltd and Leicestershire	
		CC v. Warren Energy Ltd [1995] ORB No 254	68
	4.4.3	Sandhu v Sidhu [2010] EWCA Civ 531	71
	4.4.4	Walter Lilly & Co Ltd v. Mackay & Anor. Company	
		[2012] EWHC 1773	75
4.5	Summ	narv	78

5.0 CONCLUSION AND RECOMMENDATION

5.1	Introduction		80
5.2	Relati	on with Extension of Time	81
5.3	Proble	ems Encountered during Research	
	5.3.1	Duration of Research	85
	5.3.2	Lack of Cases to 'Best Endeavours' in Construction	
		Contract	85
5.4	Furthe	er Studies	
	5.4.1	The Modification of Best Endeavours	85
	5.4.2	Practicality of Best Endeavours	86
		APPENDIXES	87
		RIRI IOCRAPHV	01

LIST OF ABBREVIATIONS

AC - Law Reports : Appeal Cases

All ER - All England Law Reports

ASBCA - Armed Services Board of Contract Appeals

BCLC - Butterworths Company Law Cases

BLR - Building Law Report

Ch - Cases in Chancery

Ch D - The Law Reports, Chancery Division

Const. L.J. - Construction Law Journal

Con LR - Construction Law Reports

DLR - Dominion Law Reports

EGCS - Estates Gazette Case Summaries

EGLR - Estates Gazette Law Reports

EW Misc - England and Wales Miscellaneous

EWCA - England and Wales Court of Appeal

EWHC - High Court of England and Wales

Exch - Exchange

Fed. Cl. - Federal Claims

FSR - Federal Sentencing Reporter

Lloyd's Rep - Lloyd's List Reports

LR - Law Reports

MLJ - Malayan Law Journal

NTSC - North American Standard

ORB - Ontario Review Board

PAM - Pertubuhan Arkitek Malaysia

P&CR - Planning and Compensation Reports

PWD - Public Works Department

QBD - Queen's Bench Division

SCR - Session Cases Report

TCC - The Technology and Construction Court

UDC - University of District Columbia

WN - Weekly Notes

WLR - Weekly Law Report

LIST OF CASES

Cases	Page
Amalgamated Building Contractors Ltd v. Waltham Holy Cross UDC [1952] 2 All ER 452	15, 32-33
Balfour Beatty Construction Ltd v The London Borough of Lambeth [2002] BLR 288	20
Bell BCI Co. v. United States [2008] 81 Fed Cl 617	26
British Westinghouse Electric & Manufacturing Co. Ltd v. Underground Electric Railways of London Ltd [1912] AC 673	38
Corporate Development International Ltd v The Hartstone Group plc QBD November 1992	35-36
Dunkirk Colliery Co. v. Lever [1878] 9 Ch. D. 20	38-39
Ellis Don v The Parking Authority of Toronto [1978] 28 BLR 98	2
Gaymark Investments Pty Limited v. Walter Construction Group Limited [1999] NTSC 143	17
Hadley v. Baxendale [1854] 9 Exch. 341	37

Cases	Page
Holland Hannan & Cubitts (Northern) Ltd v Welsh Health Technical Services Organisation [1981] 18 BLR 80	29
IBM UK Ltd v Rockware Glass [1980] FSR 335	49-50, 53-55, 57-58, 70-71, 73, 74
Ingalls Shipbuilding Division, Litton System [1978] ASBCA No. 17579	26
J and J Fee Ltd. v. The Express Lift Company Ltd [1993] 34 Con LR 147	27
John Barker Construction v London Portman Hotel Ltd [1996] 12 Const. L.J. 277	29
Jolley v Carmel Ltd. [2000] 2 EGLR 154	44
Kabatasan Timber Extraction Co. v. Chong Fah Shing [1969] 2 MLJ 6	38
London Borough of Hounslow v Twickenham Garden Developments [1970] 7 BLR 81	24
London Borough of Merton v Stanley Hugh Leach [1985] 32 BLR 51	19
Maidenhead Electrical Services v. Johnson Controls [1996]	19

Cases	Page
-------	------

Midland Land Reclamation Ltd, Leicestershire CC v. Warren Energy Ltd [1995] ORB No 254	42, 52, 68-71
Miller v London County Council (1934) 151 LT 425	31
Motherwell Bridge Construction Limited v. Micafil Vakuumtecchnik [2002] TCC 81 CONLR 44	45
Obagi v Stanborough (Developments) Ltd [1993] EGCS 205	50, 55-58
Peak Construction (Liverpool) Ltd. v. McKinney Foundations Ltd [1970] 1 BLR 111	14, 15-17
Penvidic Contracting Co Ltd v International Nickel Co. of Canada Ltd [1975] 53 DLR 748	24
Pips (Leisure Productions) Ltd v. Walton [1982] P&CR 450	40
Rackham & Anor. v. Peek Foods Ltd & Ors. [1990] BCLC 895	50-51, 60-63
Rapid Building Group Ltd v Ealing Family Housing Association Ltd [1984] 29 BLR 5	3, 17, 18, 83
Rhodia International Holdings Ltd v Huntsman International LLC [2007] EWHC 292	42-43, 51, 63-67
Roberts v Bury Improvement Commissioners [1870] LR 5 CP 310	27
Sandhu v Sidhu [2010] EWCA Civ 531	52, 71-75

Cases	Page
Sweett (UK) Ltd. v. Michael Wight Homes Ltd [2012] EW Misc 3 (CC)	41
Terrell v Mabie Todd & Co. Ltd. [1952] WN 434	42, 46, 51, 67-68
UBH (Mechanical Services) Limited v. Standard Life Assurance Co. [1990] BCLC 895	43
Victor Stanley Hawkins v. Pender Bros Pty Queensland [1994] 10 BCL 111	42
Walter Lilly & Co Ltd v. Mackay & Anor. Company [2012] EWHC 1773	52, 75-78
Wells v Army & Navy Co-operative Society [1902] 86 LT 764	27
Westminster CC v. Jarvis & Sons [1970] 7 BLR 64	3
Whittal Builders v Chester-Le-Street District Council [1987] 40 BLR 82 ASBCA No. 17579	25
Yewbelle and Knightsbridge Green Ltd. v. London Green Developments [2006] EWHC 3166	50, 58-60

CHAPTER 1

INTRODUCTION

1.1 Research Background

Delay is a common occurrence in construction industry. This is essentially because of the nature of construction works. Particularly, construction projects take a long period of time to complete. The construction operations involve many parties and workmen of various trades. The construction contracts contain many clauses and documents. If the construction works are not properly managed, delays may occur.

There are many causes that may cause delays to construction works. The delays may basically be classified into two main categories; one, excusable delays and the other, non-excusable delays.³ Excusable delays are those that are caused by the employer⁴ or his agents⁵ and by some neutral events that are beyond the control

¹ Abd. Majid, M.Z. and McCaffer, R., "Factors of Non-excusable Delays that Influence Contractors' Performance". *Journal of Management in Engineering*. ASCE, May/June (1998) 42-49.

² Employers, consultants, main contractors, subcontractors, suppliers, etc.

³ Kenneth C. Gibs, Gordon Hunt. *California Construction Law*. Aspen Publishers. New York. (2000)

⁴ Employer's requirements for variations

of the parties. For delays that come within this category, the contractor is normally entitled to extension of time. Non-excusable delays are those that are caused by the contractor's own faults or non-performance. 8 Naturally, the contractor is not entitled to extension of time; and instead, the contractor is liable to the employer in the form of liquidated damages.⁹

Relating to excusable delays, the causes may be further classified into two sub-categories: one, cause by the employer or his agents/consultants and, the other, cause by neutral events that are outside the contractor's control and they are unforeseeable. 10 Examples of excusable delays of the first category are variation orders, 11 delay in giving possession of site, 12 delay by consultants in issuing instructions, ¹³ etc. Examples of employer's caused delays of the second sub-category are unusually severe weather condition, ¹⁴ strike, ¹⁵ unavailability of materials, ¹⁶ etc. Excusable delays basically entitled the contractor to an extension of time. 17 As in the case of Ellis Don v The Parking Authority of Toronto, 18 the contractor was granted 17½ weeks extension of time due to winter season which had delayed the concreting works.

Non-excusable delays are those that are due to the contractor's lack of performance or simply or breach of contract. There are multiple causes under contractor's caused delays. Some obvious examples of contractor's caused delays are

⁵ Delay in issue instructions or drawings, etc

⁶ Force majeure, statutory authorities, outbreak of war or hostilities

⁷ Clause 23.0 PAM (2006), Clause 24.0 CIDB (2000), Clause 43.0 PWD 203A (2010)

⁸ Timothy R. Hughes. A Layperson's Guide to Delay Claims. Masonry Magazine. Hughes & Associates. (2003).

⁹ Clause 22.1 PAM (2006), Clause 26.2 CIDB (2000), Clause 40.1 PWD 203A (2010)

¹⁰ Cushman, R. F., Myers, J. J. Construction Law Handbook. New York. Aspen Law & Business.

¹¹ Clause 24.1(1) CIDB 2000, Clause 23.8(g) PAM 2006, Clause 43.1(e) PWD 2010

¹² Clause 24.1(i) CIDB 2000, Clause 23.8 (f) PAM 2006, Clause 43.1(h) PWD 2010,

¹³ Clause 24.1(e) CIDB 2000, Clause 23.8(e) PAM 2006, Clause 43.1(f) PWD 2010

¹⁴ Clause 24.1(b) CIDB 2000, Clause 23.8(b) PAM 2006, Clause 43.1(b) PWD 2010

¹⁵ Clause 24.1(c) CIDB 2000, Clause 23.8(d) PAM 2006

¹⁶ Clause 23.8(k) PAM 2006

¹⁷ Clause 24.0 CIDB (2000), Clause 23.0 PAM (2006), Clause 43.0 PWD 203A (2010)

¹⁸ (1978) 28 BLR 98

defective works, subcontractors' related caused delays,¹⁹ poor communication, financial related delays and improper planning.²⁰ This category of delay does not entitle the contractor to get extension time. Usually, the contractor is liable to pay the employer liquidated damages.²¹

Since delay is a normal occurrence, particularly when it is within the excusable delay category, time for completion may become at large and the employer may not be able to deduct the liquidated damages.²² It is submitted that all standard forms of contract contain express provisions relating to granting contractors extension of time caused by excusable delays.²³ Generally these provisions give power to the contract administrator²⁴ to grant the extension of time, set out the conditions and procedure for the application.

One of the normal conditions required of contractors to fulfil for the purposes of granting the extension of time is that the contractor must have used his *best endeavours* to reduce or prevent delay. For example, in clause 23.6 of the PAM 2006 standard form of contract, states that:

"The contractor shall constantly use his <u>best endeavour</u> to prevent or reduce delay in the progress of the works, and to do all that may reasonably be required to the satisfaction of the Architect to prevent and reduce delay or further delay in the completion of the Works beyond the completion date".

¹⁹ Westminster CC v. Jarvis & Sons [1970] 7 BLR 64

²⁰ Afshari, H., et. al. Identification of Causes of Non-Excusable Delays of Construction Projects. 2010 International Conference on E-Business, Management and Economics. Vol. 3. Hong Kong. (2011)

²¹ Clause 22.1 PAM (2006), Clause 26.2 CIDB (2000), Clause 40.1 PWD 203A (2010)

²² Rapid Building Group Ltd v Ealing Family Housing Association Ltd [1984] 29 BLR 5

²³ Clause 23.0 PAM (2006), Clause 24.0 CIDB (2000), Clause 43.0 PWD 203A (2010)

²⁴ A neutral term that refers to S.O. in PWD and CIDB, Architect in PAM and Engineer in IEM

Another example is as in clause 25.3.4 of the Joint Contract Tribunal (JCT) standard form of contract 1998²⁵ provides that:

"the Contractor shall use constantly his <u>best endeavours</u> to prevent delay in the progress of the Works...'

Based on the provisions above, one of the requirements in granting the contractor with an extension of time is that the contractor must use his best endeavour to avoid the delay of the works.

However, there are other standard forms, for examples, the PWD 2010²⁶ and CIDB 2000²⁷ that use the term 'taken all reasonable steps' instead of 'best endeavours.' It is submitted that, the courts have interpreted these two terms, both of them having no material distinctions.²⁸

Clause 43.1 in PWD 203A Standard Form of Contract (Rev 2010)²⁹ states that:

"...Provided always that the Contractor has <u>taken all reasonable steps</u> to avoid or reduce such delay and shall do all that may reasonably be required to the satisfaction of the S.O. to proceed with the Works".

CIDB Standard Form of Contract 2000 in its Delay and Extension of Time Clause, Clause 24.1 mentions that:

²⁷ Clause 24.1

²⁵ JCT Standard Form of Contract. (1998)

²⁶ Clause 43.1

²⁸ Slaughter and May. Best endeavours v. reasonable endeavours, what do they mean? Does either mean anything? London. (2007)

²⁹ Public Works Department. PWD 203A Standard Forms of Contract. (2010)

"Provided that the Contractor has carried out the Works or any section of the Works with due diligence and has <u>taken all reasonable steps</u> to avoid or reduce such delays,"

According to Chappell (2011) the term *best endeavours* used in the JCT 98 standard forms imposes on contractors two express duties: one, to take remedial actions to prevent the occurrence of delay and, two, also a duty to mitigate the loss incurred from the potential delay.³⁰

1.2 Problem Statement

Contractors have an obligation to carry out their works regularly and diligently in order to make sure that they meet the agreed completion date. Accordingly, when delay occurs or when delay is likely to occur, this duty to carry work regularly and diligently may include a duty to take any positive action which can reduce the consequences of delay and of potential delays in future. It is submitted that such an interpretation may also be made with respect the term "best endeavours" and "taken all reasonable steps" in relation to the duty to prevent and reduce delay.

Hence, it is important for contractor to understand what is meant by both terms so that they can act appropriately in order to avoid the delay and put the loss at a minimum level. In addition, the fulfilment of this duty is important for the purpose of applying for extension of time. The contractor is under a legal and moral obligation to prove that he has taken mitigation steps against the overall damages.³¹

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³⁰ Chappell, D. *Building Contract Claims*. Wiley-Blackwell. UK. (2011)

³¹ Simon, M.S. *Construction Contracts and Claims*. McGraw-Hill Book Company. United States. (1979)

It is submitted that the courts have not been consistent in construing the term best endeavours. In the case of Midland Land Reclamation Ltd v. Warren Energy Ltd, 32 the court held that the term best endeavour did not mean the next best thing to an absolute obligation or guarantee. According to this interpretation, the contractor has a heavy duty to discharge because according to the judge, it was an absolute obligation and second best was simply insufficient.

In another case, Terrell v Mabie Todd and Co.³³, the judge in this case had construed the term best endeavours as just requiring the contractor to do what was commercially practicable and what is considered as reasonable in that circumstances. It is submitted that this standard of duty is less burdensome than that under Midland Land Reclamation case.

Furthermore, according to Slaughter and May (2007) there was no exact and certain meaning to the terms "best endeavour" and "taken all reasonable steps".34 This leads to a conflict relating to the correct construction of the term "best endeavours" used in the standard form of contract.

Keating considers the contractor's duty to do his best endeavours to prevent delay is an important proviso for the granting of extension of time. He states in his book 'Keating on Building Contracts' (2003):

"The proviso is an important qualification to the right to an extension of Thus, for example, in some cases it might be the contractor's duty to reprogramme the works either to prevent or reduce delay. How far the contractor must take other steps depends upon the circumstances of each case, but it is thought

³² [1997] ³³ [1952] 69 RPC 234

³⁴ Slaughter and May. Best endeavours v. reasonable endeavours, what do they mean? Does either mean anything? London. (2007)

that the proviso <u>does not contemplate the expenditure of substantial sums of money.</u> 35 "

Relating to the extent of the contractor's duty to prevent delay under the *best endeavours* proviso, Keating suggests that, the contractor may re-programme his works. However, the actions must not involve the incurring of substantial amount of money.

Despite the above statement, it is submitted that there is no clear guidelines or established benchmark to what extent a contractor is needed to act in order to put the delay risk at the minimum level. Due to this uncertainty, the contractors are facing difficulties in deciding when it is necessary to carry out such mitigation action, to what extent and also at what cost. Even in the contractor's opinion, they had taken some reasonable steps to avoid the delay, they are still not being granted with the extension of time from the employer³⁶.

1.3 Objective of Research

Based on the above problem statement, the objective of this research is essentially to identify the requirements in performing the duty of *best endeavours* for the purpose of compliance with the proviso for the granting extension of time.

³⁶ Keane, P.J., Caletka, A.F. *Delay Analysis in Construction Contracts*. Blackwell Publishing Ltd. United Kingdom. (2008)

³⁵ Mokhtar Azizi Mohd Din. The Extent of The Contractors Effort to Mitigate Delay. PMINZ Conference. Auckland. (2011)

1.4 Scope of Research

The scope of this research is confined to the both Malaysian and international main standard forms of contract. The Malaysian main standard form of contract here refers to PWD 2010, PAM 2006, and CIDB 2000 while for international main standard form of contract is refer to JCT 1998.

Relating to the case law analysis, the cases are mainly those that are reported in the law reports provided by the Lexis Malaysia online data base. The cases retrieved were only from common law jurisdiction or Commonwealth countries.

1.5 Significance of Research

The books on construction law and construction contracts seem to give little emphasis on this topic. The contract administrators in Malaysia too do not seem to put great emphasis on this duty of best *endeavours* when considering contractors' applications for extension of time. Although there no reported cases regarding the issue of mitigating delay in the local construction industry, it is hoped that this research will give some guidelines and overview to employers, contractors and contract administrators in the local construction industry on the issue of mitigation duty.

1.6 Research Methodology

In order to achieve the objective of this research and successfully complete it in the stipulated time, there is a need to a proper plan for its implementation. Basically, this research is carried out in four main stages, they are: initial study stage, data collection stage, data analysis stage and completion stage. All of these stages will be explained further.

1.6.1 Initial Study

Initial study is important as at this stage the issue or the problem is identified. This stage requires extensive readings from various sources of literature materials in order to get a clear view on the topic chosen. This stage also involves discussion with lecturers to get more ideas relating to the topic and feasible issues of the subject matter. After all the issue and objective as well as the scope are identified, the next stage is the collection of data.

1.6.2 Data Collection

The data or information required for this research are mainly relating to the clauses in the standard forms, commentaries about those clauses. The sources for those commentaries are in the various articles, seminar papers, books and journals. The other main information require for the research is of course the relevant case law collected from the law journals available from the Lexis Malaysia online database. The data collection stage is in fact being carried continuously beginning from the initial stage. All data related to the research topic is valuable even though it is not being cited in the research writing.

The commentaries on the clauses are considered as the secondary data. The primary data are the relevant clauses and the case law. The relevant landmark and important cases are important for the purpose of achieving the objective of the research. The relevant cases are retrieve from Lexis Malaysia online database the University's Library, (Perpustakaan Sultanah Zanariah) subscribes.

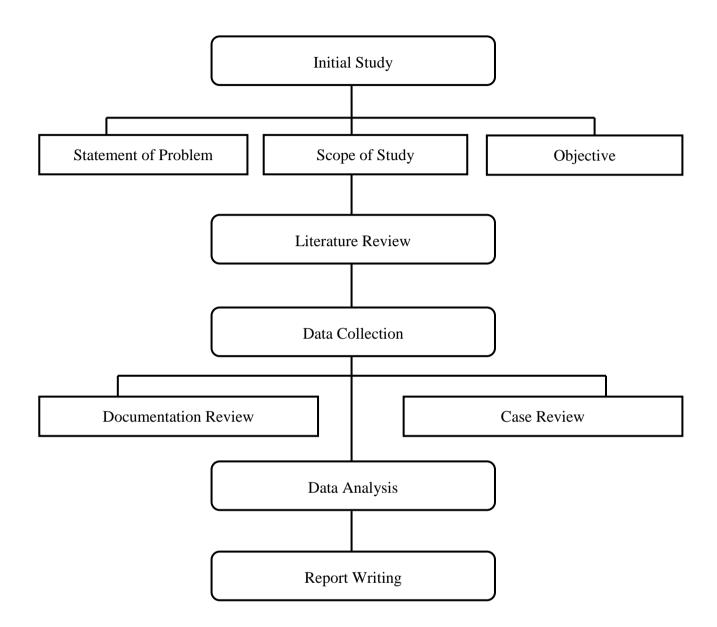
1.6.3 Data Analysis

This is the final stage of the whole research process where researcher needs to compare and discuss all the law cases in order to achieve the objective. Data analysis is very crucial because this part requires fine analytical and critical thinking. It appraises the researcher's mental and intellectual ability to analyse and synthesise the legal principles, the contract provisions and legal arguments collected.

1.6.4 Conclusion and Recommendation

After the analysis and review of all the cases, this is the stage that the researcher will make the conclusion and summary what is basically the purpose of this. This stage will summarise the research findings. I will set out in summary what actions amount to and what action do not amount to *best* endeavours. The researcher will also make suggestion as to the possible future research topic in relation to this area of research. There will also an explanation on the problems, weaknesses and limitations in carrying out this research.

1.7 Research Flow Process



REFERENCES

- Abd. Majid, M.Za. and McCaffer, R., (1998). "Factors of Non-excusable Delays that Influence Contractors' Performance". Journal of Management in Engineering. ASCE, May/June. pp. 42-49.
- Afshari, H., et. al. (2011). Identification of Causes of Non-Excusable Delays of Construction Projects. 2010 International Conference on E-Business, Management and Economics. Vol. 3. Hong Kong.
- Aleka Mandaraka-Sheppard. (2007). Modern Admiralty Law 2nd Edition. Routledge-Cavendish. New York.
- Allens Arthur Robinson. (2004). Delay and Disruption Protocol. Construction Breakfast Seminar. The Society of Construction Law.
- Andrew Noble. (1997). Contractors' and sub-contractors' constant best endeavours to prevent delay. Construction Law Journal.
- Chappell, D. (2011). Building Contract Claims. Wiley-Blackwell. UK.
- Charles A. Leonard. (1988). The Effects of Change Orders on Productivity. Concordia University.
- Charles Boundy. (2010). Business Contract Handbook. Gower Publishing Company. USA.
- CIDB Standard Form of Contract for Building Works. (2000). Lembaga Pembangunan Industri Pembinaan Malaysia.

Contract Act 1950 (Act 136). (2008). International Law Book Services. Selangor.

Cushman, R. F., Myers, J. J. (1999). Construction Law Handbook. New York. Aspen Law & Business.

Daniel Atkinson. (2000). Access to Site. Atkinson Law.

David Chappell, Michael Dunn and Michael Cowlin. (2009). Building Law Encyclopedia. John Wiley and Sons. UK.

Denise L. Nestel. (2006). Force Majeure Clause: The Basics. Executive Magazine.

Eggleston, B. (2009). Liquidated Damages and Extensions of Time. Blackwell Publishing. United Kingdom. Pp 248-249.

JCT Standard Form of Contract. (1998)

Keane, P.J., Caletka, A.F. (2008). Delay Analysis in Construction Contracts. Blackwell Publishing Ltd. United Kingdom.

Kenneth C. Gibs, Gordon Hunt. (2000). California Construction Law. Aspen Publishers. New York.

Knowles Commercial Services. (n.d). Delays, Extensions of Time and Liquidated Damages.

Lim Chong Fong. (2004) The Malaysian PWD form of Construction Contract, Sweet and Maxwell Asia, Kuala Lumpur, p. 92.

M.Z. Abd Majid and Ronald McCaffer. (1998). Factors of Non-Excusable Delays that Influence Contractor's Performance. Journal of Management in Engineering. May/June.

- Michael S. Simon. (1979). Construction Contracts and Claims. McGraw-Hill Book Company. United States. pp 240-241.
- Michael T. Callahan. (2005). Construction Change Order Claims. Aspen Publishers. United States of America. Pp 3-10.
- Mokhtar Azizi Mohd Din. (2011). The Extent of The Contractors Effort to Mitigate Delay. PMINZ Conference. Auckland.
- Oon Chee Kheng. (2003). Extension of Time and Liquidated Damages in Construction Contracts. Seminar on Construction Contracts and Arbitration. Institution of Engineers, Malaysia. Perak.
- PAM Standard Form of Contract. (2006). Pertubuhan Arkitek Malaysia.
- Price D. (n.d). Delay and Disruption Claims under FIDIC Contracts-Procedural Issues, Evidence and Assessment. Hill International.
- PWD 203A Standard Forms of Contract. (2010). Public Works Department.
- Robinson, N.M. et.al. (1996). Construction Law in Singapore and Malaysia. 2nd Edition. Singapore.
- Simon, M.S. (1979). Construction Contracts and Claims. McGraw-Hill Book Company. United States.
- Slaughter and May. (2007). Best endeavours v. reasonable endeavours, what do they mean? Does either mean anything? London.
- Smith, H. Notice Requirements in Construction Contracts A Southest Asia Perspective. (2012); Oon Chee Kheng. Standard Construction Contracts in Malaysia: Issues and Challenges. Innovations in Construction Contracts. Malacca. Pp 8-9. (2002)

- Suzanne Reeves. 2012 Construction Case Law Summary (January-June). Wedlake Bell. London. 2012.
- The Free Dictionary by Farlex. (2012). Retrieved from http://legal-dictionary.thefreedictionary.com.
- Thomas Lundmark. (1998). Common Law Tort & Contract. LIT Verlag Munster. London.
- Thomas, J. Kelleher and G. Scott Walters. (2009).. Smith, Currie & Hancock's Common Sense Construction Law. John Wiley & Sons. United States of America. Pp 281 283.
- Timothy R. Hughes. (2003). A Layperson's Guide to Delay Claims. Masonry Magazine. Hughes & Associates.
- Vivian Ramsey and Thomas Telford. (2007). Construction Law Handbook. Thomas Telford. London.
- William Ibbs and Caroline Vaughan. (2012). Change and the Loss of Productivity in Construction: A Field Guide.

BIBLIOGRAPHY

- Edwards Angell Palmer & Dodge. (2008). *The Expanding Spectrum of 'endeavours'* clauses. Retrieved from eapdlaw.com
- Entrusty Group (2006). Is The Contractor Still Entitled to Extension of Time When There is Concurrent Delay?. Master Builders.
- Marsden, J. and Scott, N. (2008). Much Effort, Much Prosperity? Best and Reasonable Endeavours Obligations and Relevants Commercial Differences.

 Memery Crystal. UK.
- Norhana Danial. (2007). *Contractor's Application for An Extension of Time*. Master in CCM. Universiti Teknologi Malaysia.
- Rosenthal, A. & Fitzgerald. Do I have to Complete? Issues which arise when contracting parties change their mind about the sale/purchase of land. Falcon Chambers.
- Rush S. (2007). Are your best endeavours always reasonable? A recent case on 'reasonable' versus 'best endeavours'. International Bar Association.
- Seltzer E.M & Gross A. M. (1956). Federal Government Construction Contracts: Liability for Delays Caused by the Government. Fordham Law Review.