

**NEGLIGENCE BY QUANTITY SURVEYORS**

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*Sincerely to my lecturers*

*Parents and families*

*Comrades*

*~Thanks you for your support, guidance and everything~*

*~ This study is for you guys ~*

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## **ABSTRACT**

Quantity surveyors are professionals that are involved in almost all phases of construction processes and throughout the life of the construction projects. The work of quantity surveyors includes the preparation of building contracts, assist in the negotiation and procurement of quotations for specialist works, preparation and valuation of interim certificates, valuation of variation works, preparing claims for the employer, preparation of final accounts and many others. Therefore, quantity surveyors are said to owe duty of care to the parties they contract with. In addition they also owe a duty of care to third parties under tort. The standard of their duty of care is generally the normal reasonable care and skill. Just like any other professionals, the quantity surveyors also commit acts of negligence in the performance of their duty. They may thereby be liable to those who are injured by their negligent acts. The issue in this research is that, what are those negligent acts that may cause the quantity surveyors liable to those injured parties. The objective of this research is to identify the conducts of the quantity surveyors that lead to professional negligence. The methodology used in this research is basically descriptive in nature. The data required are obtained from law reports retrieved from the LexisNexis Malaysia online database. The scope of this research covers both Malaysian and English cases. There were a total of fourteen cases. However, not all of them relate exclusively to quantity surveyors. They include no-quantity surveyor cases but the principles set out in them are equally applicable to quantity surveyors. The finding of the research is that the quantity surveyors are very much exposed to the negligence in the pre contract phase than any other phases.

## ABSTRAK

Juruukur bahan adalah seorang profesional yang terlibat hampir didalam semua fasa proses pembinaan. Skop kerja juruukur bahan termasuk penyediaan kontrak pembinaan, membuat rundingan dan perolehan sebutharga bagi kerja-kerja pakar, penyediaan dan penilaian sijil interim, penilaian bagi perubahan kerja, menyediakan tuntutan untuk majikan, penyediaan akaun muktamad dan lain-lain lagi. Oleh itu, juruukur bahan dikatakan mempunyai kewajipan menjaga kepada pihak dia berkontrak. Di samping itu, dia juga berhutang kewajipan menjaga kepada pihak ketiga di bawah undang-undang tort. Standard bagi kewajipan menjaga bagi juruukur bahan secara umumnya adalah penjagaan dan kemahiran yang biasa. Sama seperti mana-mana profesional yang lain, juruukur bahan juga berisiko melakukan kecuaiian dalam melaksanakan tugasnya, dan boleh disabitkan salah di atas kecederaan yang dialami orang lain kerana kecuaiannya. Isu di dalam kajian ini adalah apakah jenis-jenis kecuaiian yang boleh menyebabkan seseorang juruukur bahan disabitkan salah. Objektif bagi kajian ini adalah untuk mengenal pasti kelakuan juruukur bahan yang boleh membawa kepada kecuaiian profesional. Metodologi bagi kajian ini pada dasarnya berbentuk deskriptif. Data yang diperlukan diperolehi dari laporan undang-undang yang diambil dari pangkalan data Lexis Malaysia Online. Skop bagi kajian ini meliputi kedua-dua kes Malaysia dan Inggeris. Terdapat sejumlah empat belas kes. Walau bagaimanapun, tidak semua daripada mereka berkait dengan profession juruukur bahan. Akan tetapi boleh diguna pakai kerana terdapat persamaan prinsip. Hasil daripada kajian ini mendapati juruukur bahan lebih terdedah dengan risiko kecuaiian semasa didalam fasa pra kontrak berbanding fasa-fasa kontrak yang lain.

## TABLE OF CONTENT

	Page
Declaration	
Dedication	
Acknowledgement	
Abstract	
Table of Content	
List of Tables	
List of Cases	
Chapter 1      Introduction and Proposal	
1.1      Background	1
1.2      Problem Statement	5
1.3      Objective of the Study	7
1.4      Scope and Limitation	7
1.5      Significant of the Study	7
1.6      Research Method	8
Chapter 2      Professional Negligence	
2.1      Introduction	11
2.2      Negligence	13
2.2.1      Legal Duty to Take Care	13
2.2.2      Breach of Duty	14
2.2.3      Damage Must Be Cause by Breach	16
2.2.4      Economic Loss	17
2.3      Professional Liabilities	19
2.3.1      Contract	21
2.3.2      Tort	24

2.4	Professional Indemnity Insurances	27
2.4.1	Basic Principle of Insurance	27
2.4.2	Good Faith	28
2.4.3	Disclosure of Material Facts	28
Chapter 3	Quantity Surveyor	
3.1	Introduction	31
3.2	The History of Quantity Surveyor	33
3.3	History of Quantity Surveyor in Malaysia	35
3.4	Engagement of Quantity Surveyor	36
3.5	Professional and Its Organisation	38
3.6	Registration of Quantity Surveyor under Project Management and Consulting Quantity Surveying Act 1967	39
3.7	Quantity Surveyor Memorandum of Agreement	41
3.7.1	Liabilities in Contract	41
3.8	Quantity Surveyor as Agent to the Employer	42
3.8.1	Privity of Contract	42
3.8.2	Two Aspect of Agency in Contract Law	43
3.8.3	Creation of Agency	44
3.8.4	Authorization	46
3.8.5	The Liabilities of Principle and Agent	47
3.8.5.1	The Agent Acts Within the Scope Of His Authority	47
3.8.5.2	The Agent Acts Outside the Scope Of His Authority	48
3.9	Registered Quantity Surveyor Appointed Under Professional Advisor or Project Management Consulting Quantity Surveyor (RoQS) Act 1967 with Amendment 1985	49
3.10	Role of Quantity Surveyor	50
3.10.1	Quantity Surveyor Evolved Role	52
3.10.2	Quantity Surveyor Developing Role	54



Chapter 4	4.1	Introduction	55
	4.2.1	Negligent Advice Upon Tender	56
	4.2.2	Negligent in Estimate	57
	4.2.2.1	What is An Estimate	58
	4.2.2.2	Erroneous In Estimates	59
	4.2.2.3	Estimates Must Reflect Current Price	63
	4.2.2.4	Consequences of Negligent Forecast	64
	4.2.3	Negligent for Materials Specified in Bills of Quantities	65
	4.2.4	Negligent in Arithmetical Error in Bill of Quantity	70
	4.2.5	Liability When Error in Tenders Occur	70
	4.2.6	Negligent When Employer Specifies a Cost Limit	71
	4.2.7	Negligent When Error in Bills Occurs	72
	4.3.1	Negligent In Interim Certificates	75
	4.3.2	Negligent in Valuation of Construction Works For the Purposes of Interim Certificates	77
	4.4.1	Introduction	81
	4.4.2	Persons who act in reliance on a representation	81
	4.4.3	Contractor	82
	4.4.4	Persons who are sued for losses also caused By the quantity surveyor	83
Chapter 5	5.1	Introduction	85
	5.2	Research Finding	85
	5.3	Study Constraint	86
	5.4	Suggestion for Further Study	86
	5.5	Conclusion	86

List of References

<b>List of Figure</b>	<b>Page</b>
Figure 1.1      Research Methodology Flow Chart	10
Figure 5.1      Conduct of Quantity Surveyor that cause Negligence	88

**List of Cases**

<b>Cases</b>	<b>Page</b>
Anns v. Merton London Borough Council (1978) A.C. 729	24, 25
Blyth v. Birmingham Water Works Co. [1850] 11 Exch.781	4
Bolam v Frien Hospital Management Committee (1975) 1 W. L. R. 582 [1951] AC 850	20
Brewer v Delta [1967] 1 LIR 488	16
Candlewood Navigation Corporation Ltd. v. Mitsui O.S.K. Lines Ltd [1986] A.C. 1.	26
Caswell v Powell Duffryn Associated Collieries Ltd [1939] 3 All ER 722	4
Chamber v. Goldthorpe (1901): 1 KB.624; 70 L.J.K.B. 482; 84 L.T.444 W.R.401; 17 T.L.R.304.	83, 103
Cunard & Anor. V. Antifyre Ltd. [1932] All ER Rep. 558	4
Dhamija & Anor v Sunningdale Joineries Ltd & Ors [2010] EWHC 2396 (TCC)	85, 103
Donoghue v Stevenson [1932] AC 562 at 580	12
Dorset Yacht Co. Ltd. V. Home Office (1970) A.C. 1004	25
Dutton v. Louth Corporation and Another “The builder” February 25 <sup>th</sup> , 1995, Page 344, On Appeal, “The Builder” August 18 <sup>th</sup> , 1995.	76, 101

<b>Cases</b>	<b>Page</b>
Edward Wong Finance Co. Ltd. v. Johnson Stokes & Master (1984) A.C 296	21
Firth v. Staines 1897} 2 OB 70 at 75	49
Flanagan v. Mee (1876) 2 Vict.L.R.157	77, 101
Ford v. London & South-Western Rly. Co (1862) 2 E. and F.730	4
G + K Ladbroke v. Crawley & DeReya (1978) W.L.R 266	21
George Fischer (Holdings) Ltd v Multi-Design Consultants Ltd (1998) 61 Con LR 85.	86, 87
Gordon Shaw Concrete Products Ltd v Design Collaborative Ltd	67
Governors of the Peabody Donation Fund v. Sir Lindsay Parkinson & Co. Ltd [1985] A.C. 210	25
Greaves & CO. v. Baynham Meikle (1975) 1 W. L. R 1095	20
Hedley Byrne & Co. v. Heller & Partner Ltd (1964) A.C. 465	24
Hoster & Dickinson v. Kaye Ltd. 1 W.L.R. 1611	84, 103
J Jarvis v Castle Wharf Developments (2001) 4 Ll Rep 308	93, 104
Johore State Economic Development Corp v Queen Bee Sdn. Bhd. (1995) 4MLJ 371	69
Junior Books Ltd. v. Veitchi Co. Ltd. (1983] A.C. 520.	26

<b>Cases</b>	<b>Page</b>
K C Lim & Associates v Pembinaan Udarama Sdn. Bhd (1980) 2 MLJ 26	66, 98
Keete v. King (1938) EJ65. 54.	80
Keighley, Maxsted di: Co v Durant {1901] AC 240 at 263 per Lord Lindley.	48
Lanphier v. Phiposli (1975) 1 W. L. R 1095	19
Leigh and Sillavan Ltd. v. Aliakmon Limited (19S6) 2 W.L.R. 902	26
London School Board v. Northcroft, Son and Neighbour (1889) Hudson's B.C., Fourth Edition, Volume 2 Page 147	79, 102
Maynard v. West Midlands R.H.A. (1984) W.L.R 634	21
Midland Bank Trust Co Ltd v Hett Stubbs & Kemp (a firm) (1979) Ch 384, 402-403	5
Money Penny v Hartland & others (1824) 1 C&P 351, (1826) 2 C&P 378	64, 67, 98
Morris v. Winsbury-White [1937] 4 All E.R. 494	23
Pickering v. Busk (1812) 15 East 38	47
Pole v. Leask (1860) 28 Beav 562 at 574	47
Rotherham Metropolitan Borough Council v Frank Haslam Milan & Co Ltd and Another (1996) 78 BLR 1.	72, 92

<b>Cases</b>	<b>Page</b>
Smith v Bush (1990) 2 WLR 790	94, 105
Samuels v. Davis [1943] 1 KB. 526	23
Spartan Steel and Alloys Ltd v Martin & CO (Contractors Ltd) [1973] 1 QB 27	18
Sutcliffe v Chippendale & Edmondson (1971) 18 Build.L.R. 149 at page 162	86
Sutcliffe v Thackrah (1974) HL 1 Ll Rep 318	83, 92, 103, 104
Taylor v Hall (1870) IR4 CL 467	1
Tyrer v. District Auditor of Monmouthshire (1973) 230 E.G. 973, D.C	6, 62, 79, 98
Waghorn v Wimbledon Local Board 1877 HBC (4th ed) Vol 2, p 52	76, 100
Wagon Mound (No 2) [1967] 1 AC 617	17
Wilson v. Tunman (1843) 6 Man & G 236 at page 242	48

**CHAPTER 1**  
**INTRODUCTION**

## CHAPTER 1

### INTRODUCTION

#### 1.1 Background

Professional according to oxford dictionary is a “person competent or skilled in a particular activity”<sup>1</sup> while quantity surveyor according to the Cambridge Dictionary is a “person whose job is to calculate the cost of the materials and work needed for future building work”.<sup>2</sup> Altogether, professional quantity surveyor is a professional working within the construction industry concerned with building costs. The profession is one that provides a qualification gained following formal education, specific training and experience that provide a general set of skills that are then applied to a diverse variety of problems.<sup>3</sup> Predominantly these relate to costs and contracts on construction projects. In *Taylor v Hall*,<sup>4</sup> quantity surveyor was described as being that of a person:

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<sup>1</sup> <http://oxforddictionaries.com/>

<sup>2</sup> *Ibid*

<sup>3</sup> Benedictus, L. (26 September 2009). "The chartered surveyor: Made to measure". *The Guardian*. Retrieved 8 October 2011

<sup>4</sup> *Taylor v Hall (1870)* IR4 CL 467



*“whose business consists in taking out in detail the measurements and quantities from plans prepared by an Architect for the purpose of enabling builders to calculate the amounts for which they would execute the plans”.*

The origin of quantity surveying as a profession dates way back in the 17<sup>th</sup> Century during the restoration of London after the Great Fire in 1666.<sup>5</sup> Before 1666, masons, carpenters and other craftsmen were paid by the day, but because of the large amount of labour needed to reconstruct the city after the fire, it was decided that each craftsmen be paid for the quantity of his trades work. This meant that instead of being paid a wage, the tradesmen were paid for the amount of masonry, carpentry or any other craft ship contained in the building.<sup>6</sup>

Further, a quantity surveyor is a construction professional, and he or she is qualified and adequately trained to advice on all aspects of construction costs, financial and contractual administration. He or she is an expert on the cost and management of construction projects, whether building, civil or heavy engineering. The term professional in accordance to *Shrike*,<sup>7</sup> refers to

*“a person who is skilled and specialized, holds some special qualifications derived from training or experience and conforms to high standard of performance and work ethics. This professional belongs to a regulatory body which prescribes common rules of conduct and standard practice. This professional must perform his duty under a standard of performance”.*

However for the definition of professional quantity surveyor according to Roselan Nayan:<sup>8</sup>

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<sup>5</sup> R Smith, F Adams and E Quinn (1997) in RICS Research, Cobra 1995

<sup>6</sup> [http://en.wikipedia.org/wiki/Quantity\\_surveyor](http://en.wikipedia.org/wiki/Quantity_surveyor)

<sup>7</sup> Shrike, S (2009) on Professional Negligence in the Construction Industry, MLJ Articles

<sup>8</sup> Roselan Nayan (2008) on Role Responsibilities of Quantity Surveyor Consultant

*“it must be narrowed down to a person or corporate body that had acquired sufficient knowledge on a certain profession and has been recognized by a body or an institution They are governed by the respective Acts to ensure that they are practicing their knowledge according to the rules, ethics and regulations stipulated by the act or the government”.*

To be regarded as professional, a quantity surveyor is required to be registered with the Board of Quantity Surveyors under *The Quantity Surveyors Act 1967*.<sup>9</sup> Matters of professional conduct and practice are dealt with by the Investigating Committee which will investigate any contravention or failure to comply with the *Quantity Surveyors Act 1967*.<sup>10</sup> As it further known, the act calls *Quantity Surveyors Act 1967* is to ensure the roles, responsibilities and liabilities of quantity surveyor.<sup>11</sup> Moreover, In the event of misconduct by a member, the Board may take disciplinary action against them including removing them from registration under section 15 (1) of *Quantity Surveyors Act 196*.

In short, those who are so called professional might be sued when they are in breach or have committed a misconduct in performing their duties or responsibilities as stated or specified in the related act which is passed by the Parliament which becomes rules and regulations, and the respective professional has to abide it. Failure to comply or abide with the act will be considered by the governing body of the profession to be an unworthy member of that profession and it may lead to the removal of the professional from the professional Board of Quantity Surveyor.<sup>12</sup>

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<sup>9</sup> Section 8(1) Quantity Surveyor Act 1997

<sup>10</sup> Section 24(c) Quantity Surveyor Act 1997

<sup>11</sup> Quantity Surveyor Act 1997

<sup>12</sup> Section 15 Quantity Surveyor Act 1997

This breach or misconduct by professional quantity surveyor is recognized as negligence. Negligence according to Oxford Dictionary is failure to take proper care over something while under legal definition negligence is defined as the absence of the care which a prudent and reasonable man would take in the circumstances.<sup>13</sup>

According to Erle C.J. in *Ford v. London & South-Western Rly. Co.*<sup>14</sup>

*“Negligence is not to be defined under the circumstances of each case and also because it involves some inquiry as to the degree of care required under the circumstances of each case and also because there are always so many qualifications to every general statement of legal doctrine, that a definition leaves too many things undefined.”*

Further Baron Alderson then define negligence in general in the earlier case of *Blyth v. Birmingham Water Works Co.*:<sup>15</sup>

*“Negligence consists in the omission to do something which a reasonable man guided upon those consideration which ordinarily regulate human affairs, would do, or, doing something which a reasonable and prudent man would not do”*

It is then the duty of care to avoid doing injury which is owed by all parties involved who are likely to suffer injury in whatever form of injury.<sup>16</sup> Lord Wright in *Caswell v. Powell Etc Collieries* quotes:<sup>17</sup>

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<sup>13</sup> [http://en.wikipedia.org/wiki/Quantity\\_surveyor](http://en.wikipedia.org/wiki/Quantity_surveyor)

<sup>14</sup> *Ford v. London & South-Western Rly. Co* [1862] 2 E. and F.730

<sup>15</sup> *Blyth v. Birmingham Water Works Co.* [1850] 11 Exch.781

<sup>16</sup> *Cunard & Anor. V. Antifyre Ltd.* [1932] All ER Rep. 558

<sup>17</sup> *Caswell v Powell Duffryn Associated Collieries Ltd* [1939] 3 All ER 722

*“Negligence is the breach of that duty to take care, which, the law requires, either in regard to another’s person or his property, or where contributory negligence is in question of the man’s own person or property and the degree of want of care which constitutes negligence must vary with the circumstances. What that degree is, is a question for the jury or the court in lieu of a jury. It is not a matter of uniform standard. It may vary even in the case of the same man. Thus a surgeon doing an emergency operation on a cottage table with the light of a candle might not properly be held guilty of negligence in respect of an act or omission which would be negligence if he were performing the same operation with all the advantages of the severe atmosphere of his operating theatre; the same holds good of the workman. It must be a question of degree. The jury have to draw the line where mere thoughtlessness or inadvertence or forgetfulness ceases, where negligence begins.”*

## **1.2 Problem Statement**

A quantity surveyor as a professional is under a duty to give services with reasonable care and skill to the employer as stated by Oliver J in *Midland Bank Trust Co Ltd v Hett Stubbs & Kemp*.<sup>18</sup> Further, quantity as a professional holds himself out as being qualified to do the work entrusted to him, if he fails to possess that amount of skill or experience which is usual in the profession or if he neglects to use the skill which he in fact possesses, he will be guilty of negligence. Further, the following two cases are the fundamental aspect for the issues in this research

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<sup>18</sup> *Midland Bank Trust Co Ltd v Hett Stubbs & Kemp* (a firm) (1979) Ch 384, 402-403

In a case of *London School Board v Northcroft Son & Neighbour (1889)*<sup>19</sup> the clients brought an action against Northcroft, the quantity surveyors, for negligence because of clerical errors in calculations, which resulted in overpayments to the contractor. It was held that as the quantity surveyor had employed a skilled clerk who had carried out a large number of calculations correctly, the quantity surveyor was not liable.

However, in *Tyrer v. District Auditor of Monmouthshire*<sup>20</sup> Mr. Tyrer was a quantity surveyor employed by Monmouthshire County Council. It was found that he had issued interim certificates on a number of contracts in favour of a main contractor, who subsequently went into liquidation. The District Auditor found that the quantity surveyor must have known that the rates being quoted were ridiculously high. It was found that the standard of care he had exercised fell far below what the Council were entitled to expect from a man of his professional qualifications. In this case the quantity surveyor was found to have acted in breach of duty for approving excessive quantities and prices with builders not just because of arithmetical miscalculations but because he should have appreciated that the quantities and rates were excessive.

Those two cases above showed two contradictory decisions on conducts of quantity surveyors. It can be distinguished that in the first case quantity surveyor was not liable because he had employed a skilled clerk who had carried out a large number of calculations correctly. In the second case the quantity surveyor was found to have acted in breach of duty for approving excessive quantities and prices with builders not just because of arithmetical miscalculations but because he should have appreciated that the quantities and rates were excessive. The issue that can be raised in both cases is that what are the acts of negligence that can cause a quantity surveyor to be liable to the parties he contracts with?

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<sup>19</sup> *London School Board v. Northcroft, Son and Neighbour (1889)* Hudson's B.C., Fourth Edition, Volume 2 Page 147

<sup>20</sup> *Tyrer v. District Auditor of Monmouthshire (1973)* 23

### **1.3 Objective of the Study**

The objective of this research is to identify the conducts of quantity surveyors that may lead to professional negligence in the construction industry.

### **1.4 Scope and Limitation**

The scope of this study will cover some case law related to the case of quantity surveying profession. The cases studied will include English case law, the case law of the Commonwealth Countries and the case law of Malaysia. In summary this research will cover the following areas:

- A. Only construction cases will be discussed in the research.
- B. English case law, the case of the Commonwealth Countries and the case law of Malaysia.

### **1.5 Significance of the Study**

Merely being under a duty to take care does not of itself give rise to liability in negligence. There must be unreasonable behaviour as measured by the court's interpretation of the standard of care demanded of the professional in question. Legally, not every judgment or decision that in the end happens to be proved wrong will amount to negligence. Measurement of the boundary between mistakes or oversights and actionable negligence rests upon the court's perception of what the

reasonable professional should have done in a particular set of circumstances. It is the objective of this study to establish the common faults of the professional quantity surveyors, to list down the liability they have in the construction industry and to serve as a warning to quantity surveyors about the legal implications of their acts of negligence.

## **1.6 Research Methodology**

In order to achieve the research objective, a systematic process of conducting this research had been organised. The detail methodology is divided into several essential steps as described below (see figure 1.3 also).

Firstly, initial literature review was done in order to obtain the overview of the concept of this topic. Discussions with supervisor, lecturers, as well as course mates were held so that more ideas and knowledge relating to the topic could be collected. The issues and problem statement of this research will be collected through books, journal, cases, articles and magazines. The objective of this research will be formed after the issue and problems had been identified.

The next stage is the data collection stage. After the research issue and objectives have been identified, various documentation and literature review regarding to the research field will be collected to achieve the research objectives. Generally, primary data is collected from Malayan Law Journals and other law journals via UTM library electronic database, namely Lexis-Nexis Legal Database. The secondary sources include books, articles, seminar papers, newspaper as well as information from electronic media database on the construction contract law. These sources are important to complete the literature review chapter.

After the data collection stage, the author will analyse all the collected cases, information, data, ideas, opinions and comments. This is started with the case analysis of the related court cases. Some of the technical interpretation of law report is outside the quantity surveyor province, but it is as well that quantity surveyor should have some knowledge of the principle cases relating to his profession. The analysis will be conducted by reviewing and clarifying all the facts and issues of the cases.

The final stage of the research process mainly involved the writing up and presenting the research findings. The author will review the whole process of the research with the intention to identify whether the research objective has been achieved. Conclusion and recommendations will be made based on the findings of analysis.



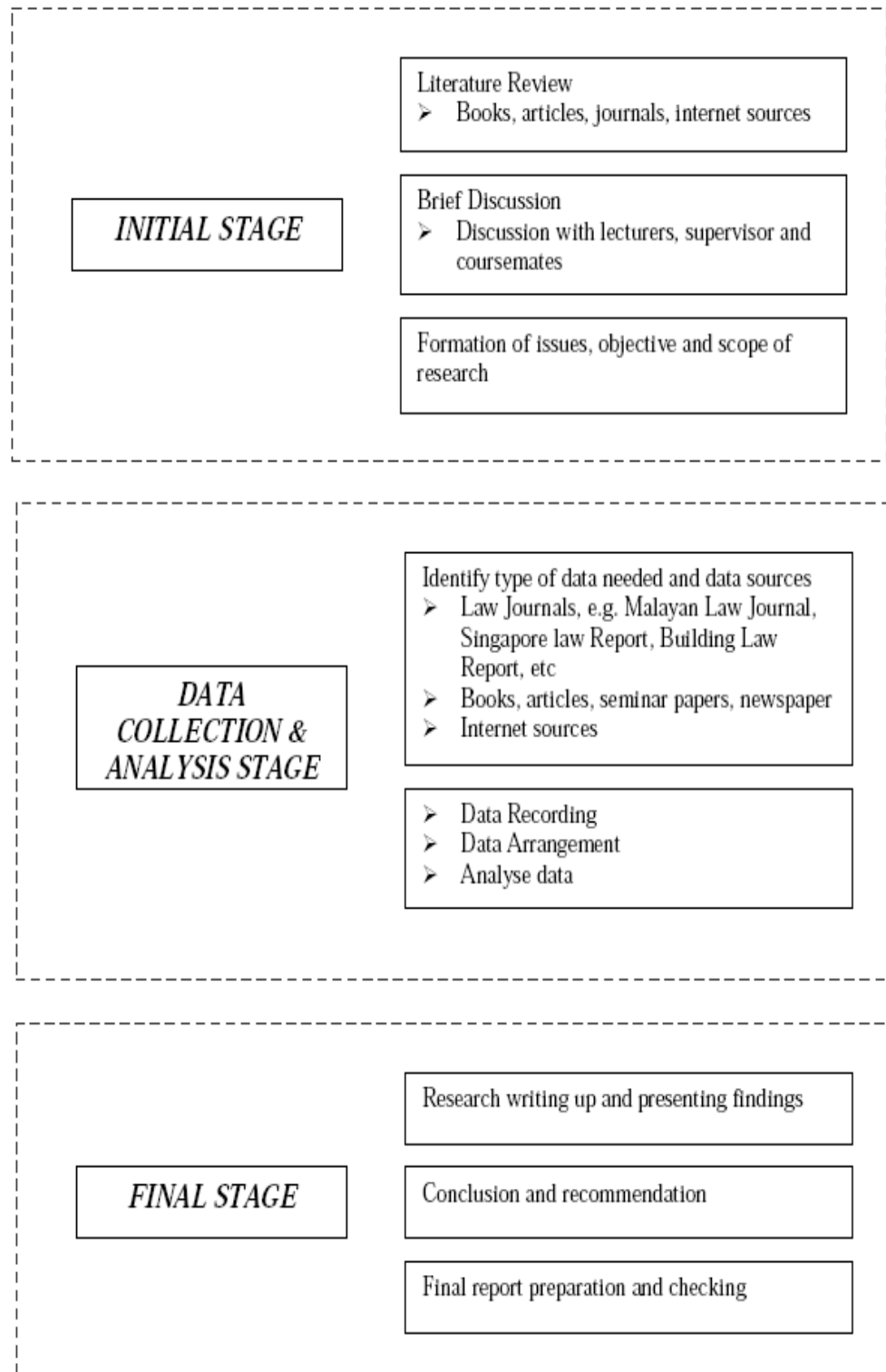


Figure 1.1: Research Methodology Flow Chart

**CHAPTER 2**  
**PROFESSIONAL NEGLIGENCE**

## REFERENCES

- Allan Ashworth and Keith Hogg (2007), *Willis Practices and Procedure for Quantity Surveyor*, (11<sup>th</sup> Edition).
- Amram Mohd Najib, *Understanding QS Liabilities* (2011), BQSM Bulletin Issue 1/2011.
- Anthony Speaight and Gregory Stone (1996), *Architect Legal Handbook*, (6<sup>th</sup> edition), Reed Educational & Professional Publishing Ltd.
- Arthur J Willis (1971), *Practice and Procedure for the Quantity Surveyor*, (6<sup>th</sup> edition), Published by Richard Clay (The Chaucer Press) Ltd.
- Ashley Underwood and Stephen Holt (1981), *Professional Negligence*, (1<sup>st</sup> Edition), Fourmat Publishing Ltd.
- Ashworth (2001), *Contractual Procedure On The Construction Industry*, (4<sup>th</sup> Edition), Malaysia Longman.
- Ashworth A. and Hogg K. (2000), *Added Value in design and Construction*, Pearson.
- Ashworth, A. and Hogg, K. Willis's (2007), *Practice and Procedure for the Quantity Surveyor*, (12<sup>th</sup> edition), Oxford; Malden, Mass.: Blackwell publishing.

Ben Petten (2003), *Professional Negligence in Construction*, (1<sup>st</sup> Edition), Published by Spoon Press.

Benedictus, L., "*The chartered surveyor: Made to measure*", (2009), The Guardian. Retrieved 8 October 2011.

Bennett, J. , *Construction Management and the Chartered Quantity Surveyor*, (1986) London: Surveyors Publications.

Chan Kin Woo, *Current Roles and Responsibilities of Quantity Surveyors*, (2009), Dissertation at <http://chankinwo-dissertation-cn3307.blogspot.com/>.

David Cheah, *PAM CPD Lecture on the Role of Architect, Engineer and Quantity Surveyor*, (2011).

Davis, Longdon and Everest, *Quantity Surveying 2000*, (1991) by Royal Instituted of Chartered Surveyor.

Digby C. Jess, *a Guide to the Insurance of Professional Negligence Risk* (1982), London Butterworth.

Duncan Cartlidge (2007), *Quantity Surveyor Pocket Book*, (1<sup>st</sup> Edition), Butterworth-Heinemann.

HKIS and RICS (1994) *Itemised scale of Professional Charges for Quantity Surveying Services for Building Works in Hong Kong*, (3<sup>rd</sup> edition), Hong Kong Institute of Surveyors and the Royal Institution of Chartered Surveyors (Hong Kong Branch).

John B Molloy, *Liability for Materials Specified in Bills of Quantities*, (2002), HKIS Newsletter 8(5) May 1999.

Jonathan Brooks and Michael, Waring *What is the extent of a quantity surveyor's duty of care*, (2010).

M Jackson (1987), *Professional Negligence*, (2<sup>nd</sup> Edition), Sweet and Maxwell Ltd.

Newton, S., *Expert Systems and the Quantity Surveyor*, (1985), London: Surveyors Publications.

R Smith, F Adams and E Quinn, *Cobra 1995*, (1997), RICS Research.

Roger Knowles, *Professional Liability Of Consultants In The Construction And Engineering Industries Including Liability To Contractors*, (1988).

Roselan Nayan, *the Package Deal Contract – Roles, Responsibilities and Liabilities of Quantity Surveyor Consultant*. (2008)

Seelay I. and Winfield R., *Building Quantities Explain*, (1990), Macmillan

Seeley, I.H. (1997), *Quantity Surveying Practice*, (2<sup>nd</sup> edition), Houndmills, Basingstoke, England: Macmillan.

Shrike, S, *Professional Negligence in the Construction Industry*, (2009), 2 MLJ cl xii  
2 MLJA 162