

**CONTRACTOR'S IMPLIED DUTY TO WARN DESIGN DEFECTS**

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To my beloved Family and  
my significant another half

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## **ABSTRACT**

In Malaysian construction industry, traditional procurement method is the most common method of procuring a project. In this method, the client contracts with consultants, and has another separate contract with the contractor. Consultants will prepare building designs in accordance to their expertise. Meanwhile contractor will contract with the client to construct the building based on designs given. However, human made mistakes happen, where design defects exist in consultants' design. Contractor during construction may discover design defects. But sadly, many contractors have a mindset that they are only contracted to construct, and any design defects is not their concern. Some may even intentionally keep silent about the discovery, so that they are able to claim for variation order for when rectification works are required to heal the problem caused by the design defect. Thus, the objective of this study is to identify whether contractor has the implied duty to warn design defects. The research methodology undertaken is by documentary analysis of law cases reported in law journals. The research have identified relevant clauses in the standard forms of contracts, and also eleven law cases related to contractor's duty to warn design defects. The findings of the analysis are: Contractor owes duty of care to his client. He is expected to warn client of design defect if a reasonably competent contractor would have noticed it and highlight it to his client. Lastly, even if contractor has raised the discovery to his client or contract administrator and was instructed to continue to construct, the contractor will still be liable, as mere discussion of the risk will not release contractor from being responsible. Contractor should take formal and further steps to warn about the perceived dangers and even refusal to carry out the works.

## ABSTRAK

Di industri pembinaan Malaysia, kaedah perolehan tradisional adalah paling amat digunakan, di mana pemilik projek mempunyai kontrak dengan perunding, dan kontrak berlainan dengan kontraktor. Perunding menyediakan rekaan bangunan, manakala kontraktor akan membina berdasarkan rekaan oleh perunding. Tetapi, kecuaihan berlaku, di mana terdapatnya kesilapan rekaan perunding. Pada masa kini, kebanyakan kontraktor mempunyai persepsi bahawa mereka hanya bertanggungjawab untuk membina dan sebarang kesilapan rekaan adalah tidak berkaitan dengan mereka. Terdapat juga kontraktor sengaja berdiam diri tentang penemuan mereka, supaya mereka dapat diberikan kerja tambahan untuk pembaikan dan menguntung daripadanya. Oleh itu, objektif kajian ini adalah untuk mengenalpasti samaada kontraktor perlu ada tanggungjawab tersirat untuk memberi amaran tentang kesilapan rekaan. Metodologi kajian yang dijalankan adalah dengan analisis dokumentari kes undang-undang yang dilaporkan dalam jurnal undang-undang. Kajian ini telah mengenal pasti klausa-klausa berkaitan di dalam kontrak am dan telah merangkumi sepuluh kes yang berkaitan. Hasil analisis ini adalah: Kontraktor adalah bertanggungjawab kepada majikan projeknya dan juga tort. Kontraktor diharapkan memberi amaran kepada majikan, jika seseorang kontraktor yang kompeten dijangka akan sedar akan kesilapan rekaan tersebut dan memaklumkan kepada majikannya. Selain itu, kontraktor masih akan dipaut kesalahan sekiranya kontraktor telah memaklumkan kesilapan rekaan dan telah diarahkan meneruskan pembinaan berdasarkan rekaan yang tersilap. Kontraktor sepatutnya memberi amaran secara rasmi tentang bahaya yang bakal berlaku dan juga menegaskan tidak menjalankan pembinaan rekaan yang tersilap tersebut.

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## CHAPTER 1

### INTRODUCTION

#### 1.1 Background of the study

Contracts Act 1950 defines ‘contract’ as ‘*an agreement enforceable by law*’<sup>1</sup>. Agreements with ‘essentials of contract’ can only be considered as a valid contract. Section 10 of the Act also defines an agreement as contract if it is made by the free consent of parties competent to contract, for a lawful consideration and with a lawful object, and is not hereby expressly declared as void.

In Malaysia, the construction contracts are governed by the general elements and rules of contract involving performance and discharge of duties and the Contract Acts 1950. Generally, construction contracts include contracts for the carrying out construction operations, arranging for others to carry out construction operations and providing manpower and labour for the operation of construction projects. Chow Kok Fong made a summary of key elements of a construction contract as follows<sup>2</sup>:

- a. A construction contract operates as an entire contract which is an indivisible contract. The contractor has to complete the entire performance of his obligations before he can call on the employer to fulfil his part. In *Gilbert-Ash v. Modern Engineering*<sup>3</sup>, Lord Diplock described a building contract as “*an entire contract for the sale of goods and work and labour*”

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<sup>1</sup> Contracts Act 1950, Section 2(h)

<sup>2</sup> Chow Kok Fong [2012], Law and Practice of Construction Contracts – 4<sup>th</sup> Edition, Sweet and Maxwell, page 85

<sup>3</sup> [1974] AC 689

*for a lump sum price payable by instalments as the goods are delivered and the work is done.”*

- b. Construction contracts contain provisions for progress payments which provide for the contractor to be paid at regular intervals<sup>4</sup>. The objective to this modification of its feature is because to enable both the execution and financial risks associated with the project to be distributed on a more efficient basis between the parties.

In order to make a construction project to be successful, there are various procurement methods being implemented, depending on the nature of the project. For example,

- Traditional procurement method
- Design and Built
- Turnkey
- Construction Management
- Others (BOT - Built Operate and Transfer)

Traditional procurement method and Design and Built method are different, where in traditional procurement method, the client will engage architect, consultants or engineers under services contract. Consultants are required to provide services to design the building and also supervision / contract administering the project during the construction stage. The consultants will begin from conceptual design to engineering design (foundation and structural framework etc), other services (i.e mechanical and electrical (M&E) works), finishes of the building and lastly compilation of these drawings for tendering process. Then, contractors are invited to tender for the project and subsequent construction when being chosen to contract with. Meanwhile in Design and Built, the client contracts the whole project to the contractor. The contractor will provide all the building design and also construction of the building.

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<sup>4</sup> JKR Form 203A [2010] - Clause 28 Payment to Contractor and Interim Certificates / PAM Contract With Quantities [2006] - Clause 30 Certificates and Payment / CIDB [2000] - Clause 42 Payment

Ashley (1985) defined a contractor as someone who contracts to build things or someone who contracts for and supervises construction, as of a building. When a contractor secures a contract to construct a project, he will enter into building contract with the employer. The contract maybe in standard forms. In Malaysia, the most common available standard forms are as follows:

- Public Works Department / *Jabatan Kerja Raya* (PWD 230A)  
– Public Project
- *Pertubuhan Arkitek Malaysia* (PAM 2006) – Private Project
- Construction Industry Development Board (CIDB 2000)  
– Private Project
- Institute of Engineering Malaysia (IEM) – Private Project

Chan (2002) expressed his view that contractor when carrying out building works, he is obliged to provide the workmanship and materials as required by the specifications given by the architect and engineers. The statement above was further acknowledged by Ficken (2006) that a contractor must carry out work tasks fully in accordance with the contract documents, usually consisting of at least plans, specifications and the building code within required time.

Gaafar and Perry (2004) state that the level of liability that design responsibility can give rise to differ between contract and tort for the party holding the responsibility. It is the same in tort for both professional designers and contractors but it differs in contract. In tort, the nature of the designer's obligation is to exercise `reasonable skill and care' irrespective of the nature of the designer's organization. In contract, however, the position in law differs to some extent between the professional designer and the contractor designer in respect of implied terms. A professional designer's liability in contract is to exercise 'reasonable skill and care'. He is not taken to warrant that the result will be achieved If the result is not achieved, but he has exercised `reasonable skill and care', he will not be liable.



In the industry, most construction professional understand their professional liability, and for most of the time, architect will be liable for the design under conventional system. Contractors also knows that, under design and build system, they would be liable for the design.

## **1.2 Statement of issues**

In the traditional procurement system, Hughes (2008) expressed that there is a strict dividing line between the functions of design and construction. Design not only consists of the broad concept of the building, but also matters of considerable detail. Designing falls under the responsibility of the employer's design team which normally comprise of an architect, and normally backed up by other specialist consultants such as civil and structural (C&S) engineers and mechanical & electrical (M&E) engineers. Consultants in the design team are normally hired under the contract of engagement.

Construction, on the other hand, is the responsibility of the contractor, whose obligation is simply to construct and complete the work in strict accordance with the contract. Normally they are contracted with the standard forms of contracts, such as PAM 2006, PWD 203A (2010) and CIDB 2000.

Navaratnam (2004) enlightened that there have been increasing incidents of defective construction works in Malaysia and elsewhere due to shoddy workmanship, negligent, cheating and sometimes design errors. He added "The consequences could be catastrophic and fatal, such the collapsing buildings and sometimes less dramatic, but no less catastrophic from a financial point of view".

In construction, there are cases to err in human. Being human, architect and engineer do from time to time make mistake in their design. The mistakes can be due to imperfect coordination and some details might be overlooked by the team, inadequate planning or miscommunication between the design team members. Contractor on the other hand, holds obligation to carry out work tasks as per contract

documents (plan and drawings) provided. Most of the contractors and / or sub-contractors would rightly consider that it is the designer's that is responsible for ensuring the design is fit for its intended purpose.

Unwanted incident happens in many projects where the design error is only discovered when the actual works had already been constructed. At one end of the scale, minor defects can easily be corrected before the building is handed over to the employer, while at the other extreme significant defects may occur long after the original work has been completed and require extensive remedial works to fix. Construction defaults which made headlines like the *Klang Valley's Middle Ring Road II* (MRR2) and the *Highland Towers*, gives rise to the question of construction team competency. The question remains whether our construction contracting system and contracts in particularly the standard forms have effectively catered for such events, whether it was that of a design fault, unexpected circumstances or by the forces of nature.

For example, *Jabatan Bomba dan Penyelamat Malaysia* imposed a requirement to construct "T-beam" at top of the houses party wall during the application of building plan approval for a housing development, to prevent fire from spreading from one unit to another and also to prevent thief from accessing from one unit to another. The T-beam was then added into the architectural drawing. However, the beam was not updated by the structure engineer onto his structural drawing. The contractor then constructed the building structure as accordance to the construction drawings issued by architect and engineer. The matter was only found out during the stage where the roof trusses and roof tiles have been installed.

The fore going discussion pointed out to the issue of whether a contractor is legally obliged to warn the design consultant of any mistake or faulty in latter's design. All the standard forms of contract are silent about this matter. Under the standard form of contract, the contractors main duty / obligation is to build and complete the building. Nowhere it is mentioned that the contractor's duties includes warning the architect / engineer of the design defect.

The issue discussed above lead to the following questions for this research is in event the contractor becomes aware of a defect or discrepancy in the design, is he obliged to warn the owner or the contract administrator of the defect? Also, what if the contractor does not spot the design defect, but a reasonably competent contractor would have?

### **1.3 Research Questions**

The following questions arise in inspiring the research problem:

- Is contractor obliged to warn design defects if the contractor noticed of it?
- What are the legal implications if the contractor does not spot the design defect, but a reasonably competent contractor would have?

### **1.4 Objective of the Study**

The objective of the research is *to determine whether a contractor is duty bound to warn of design defects when he only contracts with client to carry out construction works as per contract drawings supplied. And also to determine the legal implications in event the contractor does not spot the design defect, but a reasonably competent contractor would have.*

## **1.5 Scope of the Study**

The identified scopes of this study are as follows:

- Contractual provisions in the two major standard forms of construction contracts in Malaysia; JKR Form 203A (2010), PAM Contract (2006), CIDB (2000)
- Limited to traditional construction procurement method. Design and Built method will not be discussed in this dissertation.
- Law cases regarding contractor's duty to warn reported in Lexis Nexis and World Wide Web (WWW).

## **1.6 Significance of the Study**

This research is very important in order to benefit all the stakeholders in the construction industry especially the employers and the contractors briefly as follows:

### **a. Employers**

The employers normally do not have necessary skills and expertise in the construction industry and thus engages consultants to provide him advice and to administer the contracts. This study would bring knowledge to the employers to understand whether contractor's duty in a construction contract is merely to build as per construction drawings issued, or contractor also carries the duty to warn upon discovery of design defect.

### **b. Contractors**

Contractors importantly could have the knowledge on his obligations whether to warn design defects, or just to follow what they was contracted for (which is to build as per construction drawings issued).

Frequently, inexperienced contractor follows blindly on the given detail design by project consultant team. Some contractors are aware of the design problem but choose not to inform to the contract administrator or client, by hoping it will lead to larger problem to take place and they will be given variation addition rectification works. With this research, the contractors then would gain the knowledge on their contractual positions on their duty to warn.

## 1.7 Research Methodology

The research methodology section plays as one of the most important parts in a research report, where the readers are able to understand the instruments and procedures used in the research to help in the data collection and data processing. The research methodology has been written in detail, to ease other researchers who are interested to conduct the research in the same area, to have a reference.

It is crucial to determine the research design process before data collection. Research design with flaws or mistakes will eventually lead to irrelevant data collection and diversion from reaching the research objective. Thus, few processes in data collection and data processing are suggested, with the aim to achieve the best possible outcome, as below:

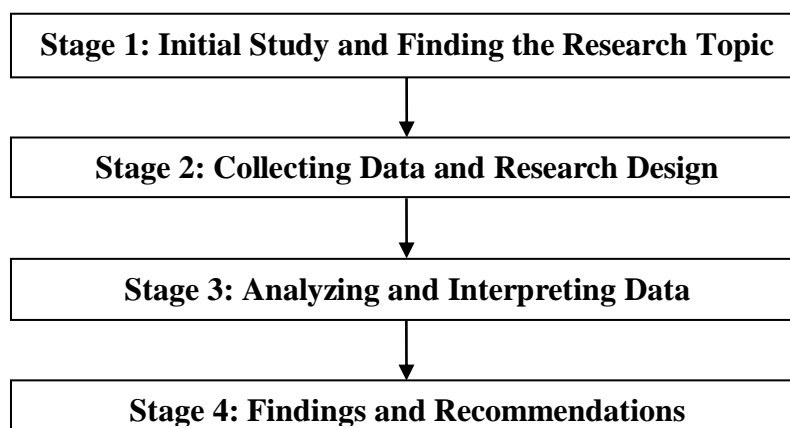


Figure 1.1: Research Methodology

### **1.7.1 Stage 1: Initial Study and Finding the Research Topic**

Stage 1 of this research involves initial study to identify few potential issues. The author grew interest to carry out further research on this issue because at the time of this study conducted, the author was working as a client representative in a housing development. The contractor shirked and refused to take any responsibility when a design defect was not noticed by neither client, consultants nor the contractor and was constructed. The author believes a study on contractor's duty to warn design defects would assist him in taking proper actions to the issue raised and as a guidance for coming projects, so that similar mistake does not happen again.

The author conducted two approaches to finalize the area of study in variation works which are:

- a. Discussion with colleagues, lecturers and construction industry's contacts from different background of work places, like property developers, architects, engineers, builders and sub-contractors.
- b. Referring previous studies conducted by researchers especially UTM students as can be found in UTM PSZ Library database of thesis collections on contractor's duty to warn. The author found out that many of the studies are on the defective works, or quality of work.

The author found out that no detailed study has been carried out for contractor's duty to warn design defects. Co-incidentally the author experienced similar issue at his job site at the time of this research proposal. Hence, the author came into decision to conduct a detailed study on this issue to determine contractor is obligated to warn design defect or not.

Background of the study which comprises problem statement, objective, significance and its scope has been written clearly in the first chapter. This is important to safeguard the author in researching in the correct direction. Processes

taken herein after should be relating to the problems and objectives to get the desired results.

### **1.7.2 Stage 2: Collecting Data and Research Design**

The second stage is to collect data and information. This is a crucial stage towards achieving the objectives of the research. In this stage, it will focus on the collection of the relevant data from the standard forms of contract and followed by case study of law cases.

### **1.7.3 Stage 3: Analyzing and Interpreting Data**

Data processing and analyzing is to sort, organize, categorize and record the collected primary data. This sorted information would be presented using illustrations such as table, chart and graph. The data collection from standard forms of contracts and law cases would be scrutinized thoroughly to get the essence of contractor duty to warn. Therefore, data analysis would be conducted in the form of documents analysis. Written and published materials such as books, journals and previous thesis would be discussed to support the author's statements.

### **1.7.4 Stage 4: Finding and Recommendations**

From the detailed findings and analysis, the author is able to identify whether contractor is obligated to warn of design defects or out of his contractual obligations. The author would also present few recommendations from the research outcome to client and contractors that will provide benefit to the contracting parties and also to the construction industry in a broader view.

## **1.8 Chapter Organization**

### **1.8.1 Chapter 1: Introduction**

This chapter presents the overall content of the whole project writing. It introduces the subject matter, the problems that are purported to solve. The objective is specified with an appropriate research method to achieve the research objectives.

### **1.8.2 Chapter 2: Design, Contractor Competency and Defects**

This chapter carries the aim to provide readers basic understanding of theoretical definitions and further explanations of few important key points, before proceeding to the in depth analysis of the discussed issue in Chapter 4. The author reviews the traditional construction procurement method, highlights what designs are covered under the scope of the consultants and duty of care owned by them. Then, contractor undertaking part of the design and the duty imposed onto the contractor will be discussed. Next, the author will review the standard or expectation of an experienced and competent contractor and lastly discuss the type of defects in construction project.

### **1.8.3 Chapter 3: Methodology**

The function of this chapter is to explain the methodology that will be implemented in conducting this research. This chapter covers the definition of research, the research strategy, data collection method, research design and the procedures to analyze the data.



#### **1.8.4 Chapter 4: Data Collection**

This chapter identifies and gathers relevant clauses in the standard forms of contracts and also analyses the results from the judicial decisions as report in law reports and further explore related cases regarding contractor's duty to warn design defects. Attempts were made to analyze the reported judicial decision and to state the law there from. This would allow not only the law to be stated, but equally important, it allows the law to be assessed in relation to the facts as found by the court.

#### **1.8.5 Chapter 5: Conclusion and Recommendations**

This chapter presents the summary of the research findings, problems encountered during research, proposed future research relating to the issue and conclusions for the overall dissertation.

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