

**THE CAUSES OF DELAY IN CONSTRUCTION PROJECT IN KUANTAN**

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for the award of the  
Bachelor Degree in Civil Engineering**

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### SUPERVISOR'S DECLARATION

I hereby declare that I have checked this thesis and in my opinion, this thesis is adequate in terms of scope and quality for the award of the degree of B. Eng. (Hons.) Civil Engineering.



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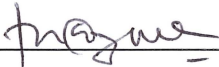
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I hereby declare that the work in this thesis is my own except for quotations and summaries which have been duly acknowledged. The thesis is not been accepted for any degree and is not concurrently submitted for award of other degree.

  
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*I decided this thesis to my parents,  
Mr. Ghazali bin Jusoh & Mrs. Rohani Binti Ismail*

*My siblings,  
Noor Akhmal  
Nur Ain  
Badrul Haffis  
Nur Aziera  
Nur Eleya Mastura*

*My Friends,*

*for their constant support and unconditional love.*

*I love you all dearly.*



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## ABSTRAK

Kelewatan pembinaan boleh ditakrifkan sebagai kelewatan projek yang telah jadualkan dan dirancang atau dijadual kontrak. Kelewatan pembinaan dapat dikurangkan hanya apabila penyebabnya dikenalpasti. Objektif kajian ini adalah untuk mengenal pasti punca kelewatan kerja pembinaan di Kuantan, untuk mengkaji kesan kelewatan projek pembinaan di Kuantan dan mencadangkan kaedah pengurusan risiko yang sesuai untuk meminimumkan risiko kelewatan projek. Sejumlah tujuh faktor disumbangkan kepada penyebab kelewatan pembinaan, enam kesan daripada kelewatan pembinaan dan sebelas kaedah meminimumkan kelewatan pembinaan dikenal pasti berdasarkan kajian literatur. Soal selidik telah diedarkan kepada responden sasaran dalam sektor kerajaan dan swasta yang terlibat dalam projek pembinaan di Kuantan. Proses itu akan termasuk lima tahap. Peringkat tersebut termasuk peringkat awal, meninjau tahap, mengumpul data dan maklumat, menganalisis data dan membuat kesimpulan. Tiga faktor paling penting yang menyumbang kepada penyebab kelewatan adalah keadaan cuaca yang teruk, terlambat merevisi dan meluluskan dokumen reka bentuk, kelewatan dalam penyelesaian tuntutan kontraktor dan produktiviti buruh. Kelewatan yang berkaitan dengan pelanggan disenaraikan kumpulan paling penting yang menyebabkan kelewatan, diikuti oleh kelewatan pekerja dan peralatan, dan kelewatan yang berkaitan dengan kontraktor. Masa dan kos ditangguhkan adalah kesan umum kelewatan dalam projek pembinaan. Untuk mengurangkan kelewatan dalam projek pembinaan, ia telah dikenalpasti oleh kumpulan pelanggan, kontraktor, perunding dan kaedah arkitek yang berkesan untuk meminimumkan kelewatan pembinaan termasuk: membayar bayaran kemajuan kepada kontraktor pada masa kerana ia merosakkan keupayaan kontraktor untuk membiayai kerja, bilangan yang cukup buruh harus ditugaskan dan bermotivasi untuk meningkatkan produktiviti, mengkaji semula dan meluluskan dokumen reka bentuk dan mengkaji semula dan meluluskan dokumen reka bentuk, menghasilkan dokumen reka bentuk pada masa dan kesilapan dan percanggahan dalam dokumen reka bentuk perlu dijaga.

## ABSTRACT

The construction delays can be defined as the late completion of work compared to the planned schedule or contract schedule. Construction delays can be minimized only when their causes are identified. The objective of this study was to identify the causes delay in construction work in Kuantan, to study the effect of delays in construction project in Kuantan and to propose suitable risk management method to minimize the risk of project delay. A total of seven factors were contributed to the cause of construction delays, six effects from construction delays and eleven methods of minimizing construction delays were identified based on literature review. The questionnaire survey was distributed to the target respondent in sector government and private that involved in construction project in Kuantan. The process will be including five stages. The stages are including preliminary stage, reviewing stage, collecting data and information, analyzing data and make conclusion recommendation. The top three most important factors that contributed to the causes of delays were inclement weather condition, late in revising and approving design documents, delays in contractor's claim's settlement and labor productivity. Client-related delays were ranked the most significant groups that cause delays, followed by labor and equipment-related delays, and contractor-related delays. Time and cost overrun were the common effects of delays in construction projects. To minimize delays in construction projects it has been identified by group of client, contractor, consultant and architect effective methods of minimizing construction delays includes: pay progress payment to the contractor on time because its impairs the contractor ability to finance the work, enough number of labor should be assigned and be motivated to improve productivity, reviewing and approving design document and reviewing and approving design document, producing design document on time and mistakes and discrepancy in design document have to take care off.

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## **CHAPTER 1**

### **INTRODUCTION**

#### **1.1 Background of Study**

Malaysian construction industry is one of the most important sectors. The construction industry has contributed to the growth of the Malaysian economy. The construction industries contribute to the national economy with the existence of various industries such as education, manufacturing, financial services and others.

Delays are the biggest problem in construction industry. Successful construction project is when it was completed on time, within the budget, with appropriate quality, follow with accordance the specifications and to stakeholders' satisfaction. The successes of a project are determined by functionality, profitability to contractors, and absence of claims.

The delay occurs when a project that has been agreed and scheduled not achieved the target within the contract period. This problem is commonly in the construction project when the project exceeds the schedules that have been executed. Therefore, it would cause delays and contribute to the factors of interruption of work, lack of productivity, increased time, increased costs and third party claims and abandonment or termination of contract. Delays are very costly

and always result in disputes and claims. Therefore, it is important to keep track of project progress to avoid the possibility of delay occurrence or identify it at early stages (Intan Diana, 2012).

Therefore, to control the delay in the project it takes responsibility of all parties to review, analyse, identify problem and find a solution in the latest renewal of the methods and strategies for planning and implementation of the project. Moreover, the party was dominated the construction industry are developers or clients consulted, consultants, contractors, suppliers building materials, labour, financial organizations and the authorities. All these parties involved directly or indirectly in the entire construction project. Efficiency and productivity in the construction industry can be seen through the cooperation that exists between all parties if the parties together to fulfil the responsibilities of implementing duties efficiently according to specifications. With this, the delay often faced in implementing the project may be reduced (Mohammad Solhi, 2010).

## **1.2 Problem Statement of Study**

Project delays are a major problem in the construction industry. Usually, project delays caused by the reasons beyond the contractor or the client's expectations. When delay in project happen it will cause a problem in contractor to complete the project. The projects undertaken will be delayed and cost of the project increases and depending on the client to provide a claim either in the process of extended or accelerated. Typically, costs allocated for delayed projects with allow a percentage of the project cost as a profit or an allowance in the contract price and this profit is usually based on judgment.

In addition, with the critical economic situation and increasing of crude oil prices, have affecting the construction industry. The construction industry will have a phase of change where the increased of costs such as costs to buy a materials and salaries for construction workers. Then, it will cause more serious problem in future construction projects. If this problem seriously continues, it will cause those who work in the construction industry will facing many procedures and regulation before been awarded a construction project. Although the parties have been agreed



with the contract for the extra time and cost associated with project delays. But many problems will be encountered between owners and contractors even if the contractor is entitled to claim additional costs. Therefore, the project manager or even the public people can see on the cause and its effect and will avoid it in future.

### **1.3 Research Aims and Objectives**

The aim of this research is to study the causes of delay in construction industry in the area of case study in Kuantan.

The objectives of the research are as following:

1. To identify the causes delay in construction work in Kuantan.
2. To study the effect of delays in construction project in Kuantan.
3. To propose suitable risk management method to minimize the risk of project delay.

### **1.4 Scope of Study**

The scope of the research is mainly focus on literature review and a questionnaire survey. This study is needed to evaluate the level of understanding and applying these delay concepts in planning, design and field operation. The questionnaire survey would be designed based on the causes of construction delays and effects of construction delays. The respondents for this research involve consultants and Construction Company that registered with Construction Industrial Development Board (CIDB).

### **1.5 Significant of Study**

This research was done for the purpose to fulfil several of significant which considered important to refer for the parties that will involve in construction especially the contractor. These significant involve:



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