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COST IMPLICATION OF FLAT ROOF DEFECTS IN RESIDENTIAL BUILDINGS

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ABSTRACT

A residential building is one that uses more than half of its floor space for living purposes. Malaysia has several different types of roofs, including flat roof and pitch roof. Most people nowadays choose flat roof because of the aesthetic appeal of the flat roof style. Concrete flat roof, rather than typical pitched roof, is commonly used in Malaysian residential buildings. There are other buildings with design slope roofs and flat roofs that preserve facility equipment on the flat roof. There are three types of defects found in flat roof which are leakage, cracking and moisture. A building defect is described as a flaw or failure in the performance, function, or user requirement and demand of a building that presents itself in the buildings. The cost of flat roof maintenance is greater. Quantity surveyor shall be one of the construction teams to implement the cost of the flat roof defect. The aim of this research is to solve the issue of cost implication of flat roof defect on residential building. For the purpose of achieving the aim of the study, several objectives are proposed which are to identify the types of flat roof defects occured in residential building, to investigate the cost implications in addressing flat roof defects in residential building, and to recommend solutions to minimise flat roof defects in residential building. The outcome gained from the distribution of the questionnaire via the 63 respondents of the conctractor company indicate the top three barriers for the cost implication of flat roof and the top three of solution and recommendation to minimize flat roof in residential building is by choosing a high quality waterproofing and to have a proper project and workmanship management during construction. The research shows that the flat roof defect is still occurring in Malaysia.

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CHAPTER 1: INTRODUCTION

1.1 INTRODUCTION

Residential building refers to the foundation and footing works of low-rise structures or works below ground level, including piling and foundation of high-rise buildings, but does not include site clearance, levelling, or infrastructure installation. According to the website of the REHDA Institute (2016), Malaysia's property market grew in step with the country's economy. In 2010, 376,583 transactions were recorded, with a total value of RM107.44 billion surpassing the RM100 billion thresholds. Transaction volume and value both increased by 11.4 percent and 32.6 percent, respectively (2009: 338,089 transactions worth RM81.02 billion). Although the country's property market is growing, the complete environmental impact of residential structures in Malaysia has yet to be assessed, particularly in terms of global warming (Ahmad Faiz Abd Rashid, Juferi Idris, and Suhaimi Yusuf, 2017).

There are many types of roof used in residential buildings in Malaysia such as flat roof and pitch roof. Nowadays, the flat roof is commonly chosen by most people due to its aesthetic value on the flat roof design. The design of the flat roof impacts the execution and physical characteristic of building and its strength Saman et. al, (2015). Flat roof surface must be free from obstruction in order for the rain water to run easily from the roof region. The slope of the roof must indeed be in understanding with details laid down and might stream water in 48 hours. The water that accumulates on the flat roof must have retained the water due to the bad design of the flat roof. Development and utilisation of a level roof must meet the starting plan and need to be kept up so the material of the waterproofing can be chosen wisely. Therefore the interface between design and maintenance should not because it were be seen from the