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**A STUDY ON THE FIRE SAFETY SYSTEM FOR TIMBER
LONGHOUSES**

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ABSTRACT

The purpose of this study is to study about the fire safety system for the timber longhouses. It is to study the lack of fire safety awareness among the longhouse residents, the location of the longhouses in connection to the response time, the flammability of the structure's material, and the lack of safety features. The objective of this study is to identify the fire safety for the timber construction buildings, study the fire safety system practice for timber longhouse, and to evaluate the existing fire safety system of the timber longhouse. This study covers for longhouses made of timber throughout Sarawak. It has been found that there are two types of fire safety system, which is, active fire safety system and passive fire safety system. For the timber longhouse, there are not that many fire protection system that can be found.

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CHAPTER 1

INTRODUCTION

1.0 OVERVIEW OF CHAPTER

This chapter introduces the research. This chapter represents the overview of the topic for the final dissertation, aim, objectives, scope of study, problem statements, and the research methodology relate to achieving the objectives of the research.

1.1 AIM OF RESEARCH

The aim of this research is to study about the fire safety system for the timber longhouses.

1.3 RESEARCH OBJECTIVES

1. To identify fire safety system for the timber construction buildings.
2. To study the fire safety system practice for timber longhouse.
3. To evaluate the existing fire safety system of the timber longhouse.

CHAPTER 2

LITERATURE REVIEW

2.1 TIMBER CONSTRUCTION

Products of the forest such as timber can be used for construction worldwide. Timber is recommended for the erection of buildings both large and small, also more than six storeys (Ramage, et al., 2016). In addition (Jonsson, 2009) states that timber is one of the alternatives for conventional construction materials. This is to reduce carbon-dioxide emissions. According to (Hafner, 2014), a renewable type of material such as timber, is important as it can help to reduce greenhouse gas emissions. Construction sector of timber is expected to create new momentum regarding the advertising of multi-storey timber construction (Hausammann & Franke, 2014). However, according to (Lattke & Hernandez-Maetschl, 2016), timber construction is complex and needs a lot of effort into the design. Based on (Scott & Towey, 2013), timber construction is environment friendly and a sustainable construction method. However according to (Evison, Kremer, & Guiver, 2018), timber construction is an alternative to reinforced concrete and steel construction. (Bal & Vatan, 2009) said that timber is an expensive material due to its strength, its lightweight, workability, aesthetic, and availability. (Wang, Valluzzi, & Modena, 2017) also mentioned that historical structures such as longhouses use timber as one of the construction materials. Timber is made out of wood, this shows that wood is a natural and organic material. Timber has been used widely for construction worldwide (Harte, 2009). It can also be used along with concrete and steel. According to (Kremer & Symmons, 2015), timber construction is a substitute