

UNIVERSITI TEKNOLOGI MARA

**HISTORIC TIMBER REPAIR
WORKS (HTRW) FRAMEWORK
FOR HERITAGE BUILDING
CONSERVATION IN MALAYSIA**

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Thesis submitted in fulfillment
of the requirements for the degree of
Doctor of Philosophy
(Design and Built Environment)

Faculty of Architecture, Planning and Surveying

August 2022

ABSTRACT

Heritage building conservation works in Malaysia often refer to the conservation process described in the standard guidelines introduced by the Malaysia National Heritage Department. The Guideline on Heritage Building Conservation is a handbook written in general steps to apply to various types of buildings and materials. This research aims to develop a specific historic timber repair works framework for heritage building conservation in Malaysia. The practitioners often face difficulty deciding on appropriate repair work on-site due to new damages found during conservation work, which is not expected but need to be done. The historic timber repair works are crucial because at the same time to preserve the local's values embedded in the historic timber. New constructions and repair work are different for every building material. The historic timber repair works need to consider the timber properties and damage symptoms. Meanwhile, the standard historic timber repair framework is necessary to support the professionals involved in Malaysian building conservation. The research case studies were selected from completed and ongoing Malaysian heritage timber building conservation projects. The qualitative case study methodology approach is conducted to achieve the identified objectives of the research. Survey analysis involves project document content analysis, semi-structured interviews with related experts, and on-site observation. The outcome of the surveys is the preferences for Malaysia's historic timber repair works. The key elements of the preferences are the Replacement Timber, the Historic Timber, the Historic Timber Repair Works Techniques, and the Historic Timber Repair Work Principles. The preferences are used to develop the Malaysian historic timber repair works framework. The framework is essential for the practitioners involved as additional specific guidance to the historic timber structure alongside the current national building conservation guidelines. This framework facilitates the work of practitioners in deciding appropriate repair methods and techniques to overcome the difficulties of unexpected building damages on site. The Malaysian historic timber repair works framework brings implications in future to reduce the repair trials on-site and potentially reduce the work timeframe. It also can be referred to in preparing a conservation contract document and maintenance plans for heritage buildings in Malaysia.

ACKNOWLEDGEMENT

In the name of Allah, the most beneficent, the most merciful.

Firstly, I wish to thank God for allowing me to embark on my PhD and complete the journey successfully. My gratitude and thanks go to my first supervisor Assoc. Prof. Ts Dr Siti Norlizaiha Harun, co-supervisor Assoc. Prof. Sr Dr Yuhainis Abdul Talib and former co-supervisor Dr Hj Norhasandi Mat.

Secondly, my sincere appreciation goes to some parties who supported with their cooperation in making my research successful, especially the staff of the Center for Graduate Studies, UiTM Perak Branch, National Heritage Department, NTQT Sdn. Bhd, Livline (M) Sdn. Bhd., K Builders Training and Consulting, Anjung Teknik, Forest Research Institute Malaysia, and Malaysian Timber Industries Board (Butterworth). My sincere appreciation goes to academicians from local universities, Assoc. Prof. Dr Hj Pauzi Abd Latif (International Islamic University Malaysia), Prof. A. Ghafar Ahmad and Dr Mohd Jaki Mamat (Universiti Sains Malaysia), Assoc. Prof. Sr Dr Hj Haryati Mohd Isa, , Dr Abdul Halim Manaf, Sr Dr Kartina Alauddin, Sr Dr Lilawati Ab Wahab and IDr Dr Hj Othman Mohd Nor (Universiti Teknologi MARA, Perak).

Finally, this thesis is dedicated to the loving memory of my dear wife, Fazliyatun Nordin and all her family members, my late mother, Hj H Habipah Idris and my father, Hj Muhammad Ismail for their prays and relentless encouragement. Special thanks to my comrades for their moral support and advice Ts Dr Norashikin Abdul Karim, Dr Nurrajwani Abdul Halim, Dr Siti Jamiah Tun Jamil, Dr Azizah Md Ajis, LAr Khairul Adham Ibrahim, Noor Faiza Rasol, Siti Rohamini Yusof and Muhammad Anas Othman. This piece of victory and blessing rewards are dedicated to all of you. Alhamdulillah.

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CHAPTER ONE

INTRODUCTION

1.1 Introduction

Building conservation helps to keep and monitor the heritage building from being destroyed or restored without systematic planning and management. Building conservation involves preserving the original condition and heritage sites and sustaining their cultural values as best as possible. The conservation process is an extension of the age of the building so that the building remains functional (National Heritage Act 645, 2005). The main purpose of conservation is to safeguard cultural significance by maintaining the materials by right conservation to prolong the lifespan and function of the building. Building conservation is always associated with heritage buildings that are old and historical. Heritage buildings are a valuable asset with significance in terms of their materials, construction, architecture and the history behind the construction. Those buildings' cultural values can investigate, translated, studied, and emulate. A new generation can understand the local's historical backgrounds through the preserved historic buildings.

According to Feilden (2003), historic buildings contain values such as architectural uniqueness, historical significance, community cultural value, builder skills, and the value of emotions experienced by visitors and local communities and also a great value to the country. That information is embedded within the building structure. Therefore, heritage building conservation involves an investigation of their historical significance in local culture that is reflected through the construction of the building to imbodyed the values.

The repaired historic timber structure should reflect the original construction (ICOMOS, 2017). The historic timber building contains information on the knowledge of previous generations (Feilden, 2003). Preserving the heritage timber building is essential as reference material for the next generation to recognize the local background and cultural values. It is necessary to conserve heritage timber buildings because the embedded intangible information, including the craftsmanship, the know-how, the techniques, and the skill of the builders are unique to their place (Karakul, 2015).