Research Article

Maintenance Management Challenges For Heritage Buildings Used As Royal Museums in Malaysia

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Abstract

Maintenance is regarded as the key to the survival of any building; be it a heritage or non-heritage. To date, there has been no published research work investigating how maintenance managers of heritage buildings used as royal museums in Malaysia currently approach the maintenance of the buildings in their custody. Thus, this paper examined the current approaches adopted by maintenance managers of National Heritage Buildings in Malaysia in managing the maintenance of the buildings under their care. In order to achieve the set objective of this paper, observational study approach was adopted. The study revealed that the maintenance unit of Istana Kenangan adopts reactive maintenance approach, which is a response to failure. The maintenance management problems identified in this paper require urgent attention and continuous improvement in order to conserve the cultural significance of the building and to generate more heritage tourism revenues.

1. Introduction

Malaysia is blessed with a rich legacy of heritage buildings with unique architectural and historical values [1]. These buildings serve as the cultural identity of the country and its people. The heritage buildings form a major repository of the cultural heritage of Malaysians. They no doubt indicate significant landmarks in the inventive genius of Malaysians [2]. The country is one of the hot tourism spots in South East Asia, and it inherited a rich architectural heritage of traditional Malay houses, royal palaces, colonial buildings, mosques, churches,
temples, monuments, railway stations etc. These heritage buildings are known for their exceptional workmanship and architectural qualities. It became paramount to conserve these buildings as they provide a sense of common identity and continuity for future generations [3].

Figure 1: Masjid Ubudiah Kuala Kangsar, Perak.
Perak Royal Museum (Istana Kenangan)

According to Ref [4], The Sultanate of Perak is one of the oldest hereditary Sultanates among the Malay States. When the Sultanate of Malacca Empire fell to the Portuguese in 1511, Sultan Mahmud Shah I retreated to Kampar, Sumatra and later died there in 1528. Sultan Mahmud Shah I left behind two princes named Sultan Alauddin Riayat Shah II and Sultan Muzaffar Syah. The former later went to establish the Sultanate of Johor while Sultan Muzaffar Syah was invited to rule Perak and hence, he became the first Sultan of Perak. The present Sultan of Perak; Duli Yang Maha Mulia Paduka Seri Sultan Azlan Muhibbuddin Shah ibni Almarhum Sultan Yusuff Izzuddin Shah Ghafarullah is the descendant of the last Sultan of Malacca. Kuala Kangsar is the royal town of Perak which is located at the downstream of Kangsar River, where it flows into the Perak River.

The present Sultanate of Perak dates back to the early 16th century when the eldest son of the last Sultan of Melaka, Sultan Muzaffar Shah established his own kingdom on the banks of Sungai (river) Perak. Though Ipoh is the state capital but the royal capital is set in Kuala Kangsar, where the palace of the Sultan of Perak is located and it has been Perak’s royal seat since the 18th century. The old palace (Istana Sri Sayong) was built by Sultan of Perak Yusuf
Sharifuddin Mudzaffar Shah who ruled from 1877 to 1887. The Sultan unlike many rulers who protected their royal palaces by carefully choosing good viewpoints in order to detect enemy approach from afar decided to build his royal palace beside the riverbank. However, the force of the monsoon seasons which led to numerous flooding became the major threat to the existence of the palace. It was decided to build a new palace that would be on a higher ground after the Big Flood of 1926, which almost swept the old palace away. The old palace was moved to where the present royal palace stands.

While awaiting the completion of the present royal palace locally known as Istana Iskandariah (Figure 7), Istana Kenangan (Figures 4 & 5) was built in 1926 to serve as a temporary residence for Duli Yang Maha Mulia Sultan Iskandar Shah (Marhum Kadasallah). The design and construction of Istana Kenangan is considered as an achievement because of the uniqueness in its local architecture. It is noted for being built entirely of wood but without the use of a single nail. The plan of the building takes the shape of a sword (pedang) in its scabbard (sarung pedang). The sword’s handle is where the Sultan’s bedchamber is located. Though the palace is small in size, it still has a beautiful throne (Singgahsana) for the Sultan. The surface of the walls is made of diamond shaped plaits (Kelarai), while the roof structure inherited the combined styles of the five ridges (perabung lima) and the ridge of a row of bananas (perabung pisang sesikat). The initial roof was made of wooden planks.
Figure 4: Istana Kenangan (Right side view)

Figure 5: Aerial view of istana Kenangan
Significance of Maintenance in Heritage Building Conservation

It is mainly through conservation of heritage buildings that we can pass on to future generations what is currently identified as being of cultural significance today, and this would be difficult to achieve if an efficient approach to the maintenance management of heritage buildings is not fully adopted [5]. Conservation is defined as the requisite actions taken to prevent deterioration by adopting approaches that extend the life and basic functions of heritage building while maintenance is defined as the continuous care and protection involving minor repair works carried out to building elements in order to keep it in good order thereby prolonging the life of such element and the entire building for as long as possible and this will require considerable administrative and managerial expertise [5]. This definition shows the significance of maintenance as a conservation process for heritage buildings. Maintenance is considered the most pragmatic and philosophically appropriate conservation method [6]. Regular maintenance is the key to the survival of any building, be it a heritage or non-heritage building. This recognition was made as early as 1877 by William Morris the founder of the Society for the Protection of Ancient Buildings (SPAB), an organization responsible for caring and preserving United Kingdom’s heritage buildings. He considered regular maintenance as “the most practical and economic form of conserving heritage buildings”. Reference [7] also emphasized that “of all the processes of conserving heritage buildings, maintenance is the single most important process”. To date, regular
maintenance is still considered as the most sustainable way of preserving heritage buildings [7].

Reference [8] described Maintenance management for heritage buildings as a process that involves the effective and efficient utilization of resources in the continuous care and protection of building elements in order to keep them in good order, maintain the building fabric and its services and prolong the life of such element and hence the entire building for as long as possible. In Malaysia today, heritage buildings are considered as valuable because of their high historical values and great tourism potentials. It became necessary to conserve these buildings in order to protect them from being destroyed. The fact that no building is maintenance free irrespective of the building being a heritage or new emphasizes that heritage buildings need utmost care and protection to limit their deterioration and prolong their life span and functions. To do so, efficient maintenance management approaches must be employed to avoid the need for potentially expensive and disruptive repair works, which may damage the buildings’ heritage value.

2. Problem Statement

Malaysia like many other nations that are recognizing the need for conserving their cultural heritage faces many difficulties in handling the challenges of heritage building conservation. Some of the heritage buildings have been demolished to pave way for urban development while others are deteriorating due to age, high cost of maintenance and poor maintenance management approaches.

Istana Kenangan which now houses the Perak Royal Museum was built as a temporary royal palace for Sultan Iskandar Shah in the royal city of Perak - Kuala Kangsar. Istana Kenangan still stands today and is being regarded as an important tourism spot in Perak. However, parts of this beautiful royal building are now decaying and degrading rapidly due to poor maintenance management approaches. This threatens the safety of both the users, visitors, artefacts and the building itself. The question here is “how do maintenance managers of heritage buildings currently practice the maintenance of the buildings in their custody?” To answer this question, this paper would aim to examine the current approaches adopted by
maintenance managers of national heritage buildings in Malaysia in managing the maintenance of the buildings under their care.

3. Methodology

Huge amount of money is continuously spent in conserving heritage buildings and the buildings keep deteriorating just few years after the conservation works on the buildings. The need for adopting observational study as one of this research strategies arose out of the desire to understand reasons why heritage buildings deteriorate just few years after carrying out conservation works on them. The author wanted to find out if there are existing guidelines used for managing the maintenance of the buildings and to understand the managerial practices adopted by maintenance managers and their organizations in managing the maintenance of heritage buildings. Besides, the research poses the “how” and “why” questions about the maintenance management practices for the conservation of heritage buildings over which the researcher has little or no control. The author carefully considered that structured direct observation might be useful for the research because it can provide information previously unknown to the researcher that is crucial for project design, data collection, and interpretation of other data.

Istana Kenangan (Perak Royal Museum) was chosen for this study. The rationale for this selection is due to the fact that the Sultanate of Perak is one of the oldest hereditary Sultanates among the Malay States and the building was built as a temporary royal palace for Sultan Iskandar Shah al-Kaddasullahibni al-Marhum Sultan Idris Murshid al-Azam Shah Rahmatullah. Besides, the building is uniqueness in its local architecture. It is noted for being built entirely of wood but without the use of a single nail. The plan of the building takes the shape of a sword (pedang) in its scabbard (sarungpedang). The surface of the walls is made of diamond shaped plaits (Kelarai). Istana Kenangan is a repository of cultural heritage for the Perak Sultanate and a symbol of cultural identity that creates psychological emotion and nostalgia to the people of Perak. Moreover, the building remains one of the best forms in which historic cultural heritage of Perak Sultanate can be expressed. Istana Kenangan characterizes the history of the people of Perak.
Necessary arrangements were made to conduct the observations. During the observational study, the researcher was cautious not to influence the behaviour of the curators (maintenance managers). Cameras were used to take photos and document the defects and level of deterioration observed on the buildings.

4. Findings

The building was last renovated in 2005 and declared a National Heritage Building by the National Heritage Department Malaysia in 2006. Barely six years after the renovation; parts of the building are now decaying due to poor maintenance management. Findings of the study showed that some parts of the buildings are rapidly decaying and this is evidenced by the defects shown in the figures below.

Figure 8: Termite attack on timber column

Figure 9: Termite attack on timber column

Figure 10: Crack on concrete base

Figure 11: Termite attack on staircase step
Since regular maintenance is the most practical and economic form of conserving heritage buildings and also the key to the survival of heritage building, it became paramount to examine the maintenance approaches adopted by the maintenance unit of this building in managing the maintenance of this building. For the purpose of this paper, the examination was restricted to maintenance implementation.

*Attitude towards maintenance:* The main goal of heritage building maintenance is to ensure the retention and enhancement of the cultural significance of the building fabric as well as retaining the functions of the building. To do this, unnecessary interventions should be avoided by considering cautiously the nature and possible effects of the defects. However, it was found out that the main purpose of maintaining Istana Kenangan relates to maintaining the image of the museum and retaining its basic functions in the most cost effective away
thereby laying less emphasis on retaining the cultural significance of the building. It was also found out that routine maintenance activities like cleaning and painting are being regarded as low status activities thereby paying less attention to these activities. The attitude of the maintenance function towards the concept of retaining and enhancing the cultural significance of the building is very disturbing. It is clear that a change in attitude is really required. The maintenance function needs a greater awareness and understanding of the importance of retaining the cultural significance of the building.

Maintenance Policies: Clear maintenance policies are important in linking assessment of cultural significance of heritage building to maintenance implementation. However, the maintenance function of this building do not assess the relative historic significance of the building as such they could not use this assessments when making decisions about maintenance priorities. As a result, the maintenance function does not do not have a clear policy that will assert that cultural significance should be the key driver for maintenance management planning and implementation. This really is an indication of poor maintenance management practices because assessments of cultural significance play an important role in informing management planning especially when considering maintenance management priorities.

Maintenance approaches: Reactive and preventive maintenance have been identified to be the two distinct types of maintenance. Reactive maintenance is characterized as a response to failure while preventive maintenance is predictive in nature and it requires careful planning. Although preventive maintenance has long been promoted as being effective and efficient approach in retaining the cultural significance of heritage buildings; the maintenance function of this building continues to adopt the reactive maintenance approach which is a response to failure. This approach has led to the deterioration of some of the parts of the buildings as shown in the figures. Reactive maintenance approach is not fundamental to good conservation as it has proved beyond doubt that it is not effective in protecting and upholding the heritage value of the buildings. Moreover, this approach does not provide economies of scale to the maintenance function and makes maintenance management arrangements quite difficult as the maintenance function may not be able to plan for minimal intervention.
Inspections and Condition Surveys: Regular inspections are considered a fundamental part of preventive maintenance programme in the sense that they help to identify the condition of the fabric, identify the need for the repair, prioritize the repair needed and identify the cost of the repair needed. Though the maintenance unit of this building carries out less formal surveys of the condition of the fabric at much more frequent level, yet the building continues to deteriorate simply because there were no formal systems for inspecting the building and there is no adequate provision of fund to undertake the proposed work that comes from the survey. The maintenance unit relied on using only internal staff to carry out the inspections instead of using both internal staff and external consultants. Employing external consultants provides an independent perspective and to a reasonable extent it serves as an assessment of the effectiveness of the maintenance unit.

Information Management: The significance of information and records for the maintenance management of heritage buildings cannot be over emphasized. Effective records that give a detailed historic development of the building are a fundamental part of the cultural history of the building because they help to explain why and how the building is significant. From the study, it was found out that there is no integrated information system that would enable the collection, storage and retrieval of suitable information to ensure efficient and effective maintenance management. In addition to this, maintenance records are not given the level of importance that they should be given. The maintenance unit only considered these records as important for maintenance management purposes but not for archival documentation in relation to cultural history. Most importantly, the level of understanding of the importance of maintenance records from a cultural heritage perspective was poor.

5. Conclusions

The study revealed that the maintenance unit of Istana Kenangan continues to adopt the reactive maintenance approach, which is a response to failure. This approach among other factors has led to the deterioration of some of the parts of the buildings as shown in the figures. Reactive maintenance approach is not fundamental to good conservation as it ineffective in protecting and upholding the heritage value of the buildings. More so, the maintenance function needs a greater awareness and understanding of the importance of
retaining the cultural significance of the building. The maintenance strategy for heritage requires repairing the building fabric very close to the original using traditional techniques and traditional matching materials and being sensitive to the original structure. Therefore, there is an urgent need to develop a specific framework that would act as a basis for heritage organizations to prepare guidelines for managing the maintenance and conservation of heritage buildings.

**References**


Biography


