



## CHALLENGES IN THE ADAPTIVE RE-USE APPROACH OF HERITAGE BUILDING AT PUBLIC UNIVERSITY IN MALAYSIA

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### Abstract:

Historic buildings are now gaining the attention of various parties to ensure that historic buildings can be maintained in the future. In an effort to preserve historic buildings in Malaysia, various measures have been taken including the relocation of historic buildings involving several methods and types of use. However, the suitability of relocation and re-use of the building according to the suitability of the new site as well as the needs of its users is often in dispute till this day. The absence of guidelines and long-term activity plan in ensuring the continued use of historic buildings is a major factor that is often tinted by many parties in architectural and building maintenance discipline. The aim of this study is to analyse the viability of approaches and planning for heritage buildings that have undergone relocation and adaptive reuse in four public universities. The selection of subjects is in line with the recent trend, which indicates that more and more public universities have started to participate in conservation projects since the early 2000. This study is a qualitative study involving observations and interviews method of data collection which covers 7 heritage buildings at 4 public universities in Malaysia. Three adaptive approaches, namely - museums, architectural research centres, and arts and cultural centres, were found in this review. However, certain factors of building management and maintenance have been described as the greatest constraints in ensuring the building conservation remains sustainable. The study therefore suggests that a new approach to technology development and sustainability themes considerations is a significant aspect to be considered in the future.

**Keywords:**

Adaptive Reuse, Heritage Building, Conservation, Maintenance, Planning

**Introduction**

Historic buildings are the best tangible heritage that has various uses and importance in terms of technology, culture and background of a society. It also provides a key reference source that can form an understanding of the history of a traditional settlement and city. In addition, the importance of conservation of old buildings that have a wide range of historical backgrounds is largely translated through effective adaptation and maintenance projects. Apart from technology, history and culture, the conservation of old buildings is also recognized as a method that can stimulate the economy of the building and its environment. Evidence from around the world has shown how conservation methods with adaptive approaches are increasingly gaining ground due to their ability and success in raising the identity and economy of the location where the building is located. Among the positive qualities and benefits derived from the adaptive method include:

- Historic buildings create a focal point that people can connect with and know - giving a sense of place.
- They may be well -known as local landmarks known to the community and will gather to support or rescue.
- Fabrics and designs can add a special identity to new parts of the regeneration scheme - enhancing the urban landscape and improving the overall quality of the built environment.
- They may have interesting historical and cultural associations that can be interpreted and developed through a wider area of regeneration.
- They can help achieve the objectives of sustainable development.
- They may attract tenants / occupants who are not interested in less special buildings.
- They feed people's interests in the past.

In addition, historic buildings are an architectural heritage that can give us a sense of awe and make us want to know more about the nation and culture that produced it. Fielden, 2000 also thinks that a building can last up to 100 years of use and because of that the building can be named as a historic building. Yet, in evaluating historic buildings as well, there are other elements such as unique architecture, aesthetics, history, documentary, archaeology, economics, social, political, spiritual and symbolic. As such, this historic building is very valuable to be preserved for the sake of cultural interests that will provide benefits in the future.

Various efforts have been made to save this heritage treasure in Malaysia where these efforts began as early as the 1970s when the country adopted act 168 which is the Antiquities Act which saw the gazetting of sites and buildings throughout the country. This effort is always continued through the new 645 Act. The same principles and rules relating to the protection, conservation and preservation of appropriate heritage and culture remain in effect at the proper purpose and place. This is to ensure that the country can cope with the loss and destruction of the heritage we have today for the future. In addition to this act, the National Heritage Department has also issued a module on guidelines for the conservation of heritage buildings in July 2012.

Preserve historic buildings in Malaysia also including relocating these historic buildings to a new area that is said to be safer to care for and maintain. The relocated building has certain agencies to ensure that the building continues to be preserved after the relocation. However, in Malaysia, this relocation has become a trend when certain parties relocate this building for the benefit of some organizations such as a medium of learning, tourism or vice versa. However, it does not concern the strategic location for the building. It was found that there are about 20 buildings that have been relocated.

## Literature Review

### *Adaptive Re-Use*

Adaptation of historic buildings is an important element in 10 conservation work commonly done on historic buildings (Erne Hamsah, 2006; Mohamad Ismail Othman, 2006; Paiman Keromo, 2006). Adaptation of historic buildings can be defined as the renovation of a place choice in accordance with the corresponding type of use as proposed. Adaptation is also a process of changing the function of a building for the new needs or demands of the occupants. This approach to adaptation highlight on i) preservation of the original historic building structure and design, ii) only involves the work of modifying the functions and uses of historic buildings for new uses other than the original functions and uses and iii) able to improve the economic standard and value of historic buildings in line with the needs and current conditions in the surrounding Area. This historic building should be reused as this is one of the efforts to preserve this building from being destroyed and abandoned. According to Highfield and Gorse, 2009 of this building is only available in historical folds, reference books in the library or descriptions in postcards of memories better it is in a form that has been adapted reuse such as museums, galleries, hotels and others.

### *Maintenance of Historical Buildings*

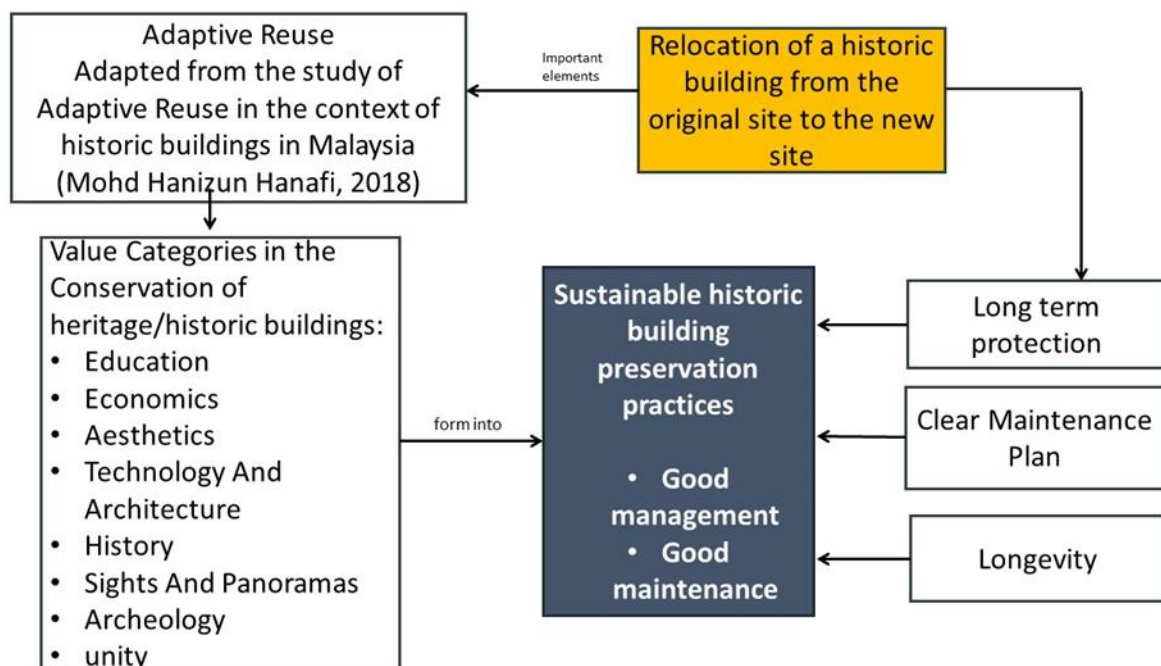
Maintenance in this context can be defined as the provision of work, repair and maintenance of historic building structures and their emergence after construction or after restoration to a satisfactory level to meet the requirements of its function within a certain period of time and to prevent damage. This maintenance is very concerned with the physical condition and the surrounding area is always in good condition, satisfactory and free from any damage. It also needs to be done continuously according to a set schedule (periodically) and not just according to circumstances and needs. On the other hand, this maintenance can extend the lifespan of historic buildings for a longer period of time (Kamarul, 2014).

The maintenance work done on this historic building is important to continue to make this building usable and keep it in good condition. In addition, it is also important for us to maintain the value of historical treasures as heritage buildings that have been recognized around the world and recognized by UNESCO. Efforts to preserve the historic value of buildings are very important in economic development, especially in the tourism sector. It is therefore important to ensure that the quality of historic buildings continues to be emphasized. Moreover, efficient and effective management and maintenance is required in the care and restoration of this historic building (Norshila Hashim, 2012).

### ***Preserving Historical Buildings***

According to a study by A.F. Mohd-Isa, 2011 who has gathered the agreement of various charters on the value and importance of heritage preservation that there are several categories of preservation importance that can be used as a guide for good building preservation practices. Among them, i) education, ii) Economics, iii) Aesthetics, iv) Technology and Architecture, v) History, vi) Scenery and Panorama, vii) Archaeology and viii) association. This category can also measure the extent to which historic buildings can be adapted for reuse because this value of importance can preserve the historic building (refer figure 1).

However, through education, this preservation can open the minds of the community about the importance of defending the heritage that we have through the education sector at various levels and thus can be encouraged in the preservation of national heritage. Apart from that, this historic building can be used as a tourism product in attracting tourists from various countries to see the heritage we have, thus improving our country's economy. For example, a traditional Malay house hundreds of years old that can be used as a tourist attraction for visitors to see the remains of that heritage.



**Figure 1 Theoretical Framework**

Source: Authors



### **Methodology**

This study is a qualitative study involving observations and interviews. The observation was made to assess the condition of the building by looking at some criteria and components of the historic building. Each building component will be assigned a number ranging from 1 to 5. Meanwhile, subject selection was done using a purposive sampling approach of subject recruitment techniques with certain considerations. The recruitment of subjects was done considering the selected subjects could provide complete data on the study that the researcher conducted. This means the interviews are carried out by the management involved and those

in charge. This study site covers four public universities in Selangor and Negeri Sembilan. The study found that seven of the buildings in Table 1 consisted of residential buildings formerly owned by aristocrats and traditional settlement leaders throughout Peninsular Malaysia.

Nevertheless, the record of the frequency of use of the building shows that there is no continuity in terms of visitor visits, action plans and building coordinators, which remain the biggest challenges faced by the four Public Higher Education. In conclusion, the results and recommendations from this study are expected to help in preserving historic buildings in line with the objectives.

**Table 1 Buildings in The Institute of Public Higher Education**

General information	Photo of the buildings		
<p><b>Istana puteri bongsu</b></p> <p>- Now at National University of Malaysia - Built on 1906 - Kelantan Malay-art architecture</p>		<p><b>Rumah Dato' Raja Diwangsa</b></p> <p>- Now at Universiti Putra Malaysia - Built on 1935 - Negeri Sembilan Malay architecture</p>	
<p><b>Rumah Haji Wan Muda Haji Hassan</b></p> <p>- Now at Universiti Putra Malaysia - Built on 1820 - Terengganu Malay-art architecture</p>		<p><b>Rumah Penghulu Ismail B. Khatib</b></p> <p>- Now at Universiti Putra Malaysia - Built on 1924 - Pahang Malay architecture</p>	
<p><b>Rumah Perak Uda Noh b. kanda Jaafar</b></p> <p>- Now at Universiti Putra Malaysia - Built on 1904 - Perak Malay architecture</p>		<p><b>Rumah Kutai</b></p> <p>- Now at Universiti Islam Antarabangsa Malaysia - Built on 1910 - Perak Malay architecture</p>	
		<p><b>Rumah Warisan Hajah Kundur</b></p> <p>- Now at Politeknik Port Dickson - Built on 1902 - Negeri Sembilan Malay architecture</p>	

Source: Author

**Result and discussion**

According to the findings in Table 2, there are five major goals of transferring this historic building to Public Institutions of Higher Learning, i) Saving and preserving historic buildings, ii) making historic buildings learning and reference materials for students, iii) converting historic buildings into mini galleries or mini museums, iv) learning platform and v) promoting historic buildings in the community.

**Table 2 The Goal of Building Relocation**

<b>Buildings</b>	<b>Goal</b>
Istana Puteri Bongsu (UKM)	i. As a mini gallery or mini museum ii. As a teaching materials for construction subject iii. As a learning studio iv. As a cultural center
Muzium Warisan Melayu (UPM)	i. As a mini gallery or mini museum ii. As a teaching materials for construction subject iii. As a learning studio iv. As a cultural center v. To preserve and save this traditional house from decaying
Rumah Kutai (UIAM)	i. As a mini gallery or mini museum ii. As a teaching materials for construction subject iii. As a learning studio iv. As a cultural center v. To preserve and save this traditional house from decaying
Rumah Warisan Hajah Kunder (Polytechnic)	i. As a mini gallery or mini museum ii. As a teaching materials for construction subject iii. As a learning studio iv. As a cultural center

Source: Author

As shown in table 3, the outcomes of these activities revealed that only Rumah Kunder charges no fees or charges for every usage. Other institutions, on the other hand, charge special admission fees and daily rental fees. It is from this fee that the management office pays for maintenance and maintenance staff wages.

**Table 3 Existing Activities and Types of Economic Generation**

<b>Buildings</b>	<b>Types of economic generated</b>	<b>Activities</b>
Istana Puteri Bongsu (UKM)	Space rental (per hour/daily)	<ul style="list-style-type: none"> <li>• Festival</li> <li>• Cultural event and workshop</li> </ul>
Muzium Warisan Melayu (UPM)	Space rental (per hour/daily)	<ul style="list-style-type: none"> <li>• Cultural events</li> <li>• Traditional games/tournament</li> </ul>

Rumah Kutai (UIAM)	Photoshoot (minimum income: RM100 per photoshoot)	<ul style="list-style-type: none"> <li>• Special ceremonies</li> <li>• Studio</li> </ul>
Rumah Warisan Hajah Kundur (Polytechnic)	Not available	<ul style="list-style-type: none"> <li>• Cultural events</li> <li>• Traditional games/tournament</li> </ul>

Source: Author

**Table 4 Building Maintenance**

Buildings	Maintenance	Interval
Istana Puteri Bongsu (UKM)	Outside and inside maintenance	3 time a week
Muzium Warisan Melayu (UPM)	Maintenance made if any damage occurred	Damage inventory (2017) If necessary
Rumah Kutai (UIAM)	No maintenance being done. Only landscaping.	If necessary
Rumah Warisan Hajah Kundur (Polytechnic)	No maintenance being done	Cleaning process 2 time a week

Source: Author

Table 4 shows the maintenance of historical buildings. Some historic structures are only maintained when absolutely necessary. However, there are also those who carry out regular maintenance by cleaning the building to ensure that the building is not damaged.

This maintenance is a testament to the structural strength of this building after it was preserved and relocated. The study also found that regular maintenance is also essential for preserving the quality of this structure over time.

**Table 5 Challenges and Obstacles in Building Adaptation at Public University**

Buildings	Obstacles and challenges
Istana Puteri Bongsu (UKM)	<ul style="list-style-type: none"> <li>No strong electricity supply in the relocated building area</li> <li>Difficult process to visit</li> <li>No budget and provision for regular maintenance</li> <li>Building considered unprofitable the management</li> </ul>
Muzium Warisan Melayu (UPM)	<ul style="list-style-type: none"> <li>A problem faced after changing in management team</li> <li>No allocation from any party including the University</li> <li>Cost for maintenance is from the proceeds of renting the building</li> <li>No specific individual in charge to look after and monitor the building</li> </ul>

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Rumah Kutai (UIAM)	Bad management No allocation The building is not a university priority Difficult to get sponsorship from outside parties
Rumah Warisan Hajah Kundur (Polytechnic)	Not many people are interested in this historic building because it cannot generate an economy

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Source: Author

According to table 5, the most significant difficulty and stumbling block is a lack of adequate funding to maintain this historic building. Poor maintenance is also the source of many building damage issues, which disrupts business operations. Furthermore, researchers discovered through interviews that the discontinuity in plan, as well as the original aim of the relocation of this historic structure, happened after the change of management.

### Success Story of Relocated Historical Building

Aside from the challenges and disadvantages, relocating historical buildings to public universities has advantages and importance for heritage buildings. These are some examples:

- I. Provide a sense of identity and continuity for future generations.
- ii. It represents a nation's past history and culture, as well as the architectural heritage of specific areas.
- iii. Reflection of culture and history and improve people's understanding of specific historical events.
- iv. Increase knowledge on timber technology.
- v. The university's landmark.

### Conclusion

The study suggests that the architecture of a 100-year-old historic building needs to be maintained on a regular basis in order to extend its life. Nonetheless, the lack of financial allocation was discovered to be the reason of the limits on performing upkeep on this historic structure. Furthermore, the survey carried out reveal significant flaws in the effort to adapt to the use of this historic structure for conservation purposes. At the same time, the study's findings suggest that the unclear goal of relocation is a contributing factor in the neglect of these ancient structures. As a result of this research, it is predicted that the historic buildings in the four universities would be preserved by making greater use of them for learning rather than economic activities.

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