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ASSESSING CONSERVATION APPROACHES FOR SUSTAINING HERITAGE BUILDINGS: A CASE STUDY OF IPOH OLD TOWN, PERAK, MALAYSIA

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Abstract

The worldwide emphasis on heritage building conservation has become one of the strategies to effectively conserve the values of heritage buildings and preserve their historic significance. Heritage buildings, acknowledged as vital assets for local development, particularly in the realm of tourism and cultural enrichment, require conservation efforts aligned with urban regeneration initiatives. Despite these international efforts, challenges persist in implementing effective conservation strategies, resulting in continuing deterioration. Therefore, a better understanding of the approach needed to conserve heritage building is important for its long-term sustainability. This qualitative study, involving site observation and semi-structured interviews with the Ipoh City Council and caretakers of selected heritage buildings, focuses on Ipoh Old Town as a case study as it is a historical area abundant in heritage and cultural elements. The findings highlight preservation and rehabilitation as prevalent conservation approaches, while restoration poses notable challenges in sustaining heritage buildings in Ipoh Old Town.

Keywords: Conservation approach; heritage building; preservation; rehabilitation

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INTRODUCTION

In the process of regenerating historical areas, the conservation of heritage buildings is a crucial measure to prevent the deterioration of their historical and cultural significance. These heritage buildings serve as tangible representations of local cultural heritage, as manifestations of the lifestyles shaped by communities across generations. Proper management and maintenance of these heritage buildings are imperative; failure to do so could lead to the gradual loss of the nation's historic townscape (Abdul Latip et al., 2018). The term "townscape" refers to a city area that significantly contributes to the city's distinctive characteristics. Cities with a strong sense of place, identity and image often showcase unique aesthetic features within their townscape, fostering a sense of community (Lazim & Said, 2020).

Within the framework of urban regeneration initiatives, it is crucial to consistently prioritise the conservation and preservation of heritage buildings (Hashim, Dali & Alias, 2023; Bedate, Herrero & Sanz, 2004). Conservation, in this context, refers to the safeguarding of the physical aspects associated with the "profession and knowledge of the restoration". It encompasses a set of measures aimed at mitigating erosive elements and enhancing the physical condition of architectural heritage. These measures include direct interventions, such as modifications to the structure and materials, as well as indirect intervention that involve alterations to the surrounding or important elements of heritage buildings (Feilden, 2007). Heritage buildings are essential to conserving, considering their aesthetic, architectural, functional, historical, cultural, ecological, economic and commercial value. Contemporary efforts emphasise conservation approaches to preserve and enhance the architecture, culture, history and sense of community associated with heritage buildings (Li & Tang, 2024).

Despite these efforts, global conservation activities currently face challenges in implementing effective strategies to prevent continuing of building deterioration. According to ICOMOS (2020), approximately 65% of the world's heritage buildings with artistic and cultural significance lack maintenance and are poorly conserved, leading to a continual loss of cultural, artistic and economic value. Some abandoned or commercial heritage buildings in Malaysia remain improperly rehabilitated due to uncontrolled refurbishment and functional changes, compromising their authenticity value. Practitioners face challenges in identifying decay patterns and deciding on suitable conservation approaches for different cases. Therefore, a better understanding of the necessary conservation approaches is important for long-term sustainability. This is in line with the universal call, where countries have pledged to "make cities and human settlements inclusive, safe, resilient and sustainable" under Sustainable Development Goal (SDG) 11. Within this goal, Target 11.4 aims to "strengthen efforts to protect and safeguard the world's cultural and natural heritage" (UNDP,

2023). Assessing the long-term sustainability of development requires a comprehensive understanding of important aspects contributing to heritage building conservation. Awareness of factors contributing to a building's success should be addressed, evaluating the most significant criteria based on users' perceptions. Policy makers, authorities and other stakeholders can use this information to prioritise criteria during conservation, ensuring sustainable development.

In this case study, Ipoh Old Town, a historic town with numerous heritage buildings, provides insights into the effectiveness of conservation approaches. Some of these buildings, despite conservation efforts, remain abandoned or have undergone modifications, risking the loss of their identity and authenticity over time. The feasibility of conservation approaches plays a critical role in preserving the aesthetic value of heritage buildings.

Therefore, this research study focuses on heritage building conservation efforts to sustain these valuable buildings. The objective of this study is to explore conservation approaches aimed at sustaining heritage buildings. Following sustainability standards, conservation efforts represent a commitment to prolonging the life of heritage buildings. Techniques, methods and materials used in rebuilding and reconstructing these valuable structures are crucial considerations within conservation efforts (Harun, 2011). Conservation approaches comprise a range of actions, including restoration, preservation, rehabilitation, adaptive re-use, reconstruction, or any combination thereof. Given the architectural uniqueness of historic buildings, current decisions regarding conservation approaches for heritage buildings are predominantly influenced by historical and cultural factors.

LITERATURE REVIEW

Heritage and Conservation

In general, conservation represents a technical undertaking towards heritage buildings (Munos & Vinas, 2005), entailing an integrated and enlightened awareness of the historic environment. This endeavour is dedicated to the preservation of cultural property for future generations, encompassing long-term maintenance, regeneration and improvement. Conservation involves physical actions directed at safeguarding the fabric and materials of heritage buildings. Guided by conservation principles, the preservation of the original building structure and fabric is prioritised to maintain the national heritage in its natural condition and authentic significance (Harun, 2011). While conservation is an approach aimed at preventing degradation and extending the life of buildings, it is often linked with renovation, despite the apparent simplicity of conservation principles.

Moreover, public participation plays a pivotal role in educating the public about conservation approaches and the significant value of heritage. Involving the public in the conservation of heritage buildings contributes to fostering a deeper understanding and appreciation of shared heritage. This can be achieved by actively engaging the public in learning about the conservation of heritage buildings, thereby promoting informed and active participation. Heritage values are perceived differently across generations and societies (Ying, et al., 2023), making ongoing education instrumental in improving knowledge and understanding of heritage building conservation. Establishing, retaining and transmitting specialist knowledge and skills is essential in the endeavour to preserve heritage buildings for future generations.

Conservation Approach

Conservation represents a developmental initiative or project designed to prolong the lifespan of heritage buildings through various actions influenced by historical and cultural considerations (Harun, 2011). Jabatan Warisan Negara (2023) classifies conservation approaches into nine categories; (i) Preservation; (ii) Prevention; (iii) Consolidation; (iv) Restoration; (v) Rehabilitation; (vi) Reproduction; (vii) Reconstruction; (viii) Adaptive Reuse; and (ix) Maintenance. However, the specific conservation approaches explored in this study align with those indicated in the Ipoh Old Town Special Area Plan 2020, which are:

a) Preservation

Preservation encompasses the works carried out to maintain the building, structure or monument in its original form, and needs to be implemented where necessary in the effort to prevent damage or deterioration in future (JWN, 2023). This approach involves actions or processes to protect, sustain and stabilise the original materials, form and integrity of heritage buildings, safeguarding their heritage value. Preservation seeks to ensure structural safety, enhance the well-being of heritage buildings, and prevent further deterioration, decay, or dilapidation (Harun, 2011). Using systematic and scientific methods aligned with conservation principles (JWN, 2023), this conservation approach is well-suited for preserving the significance of heritage buildings value where the current fabric or its condition contributes to their cultural value. Monitoring, maintenance and the repair of historic monuments and their surroundings are integral to this approach.

b) Restoration

The restoration of heritage buildings involves a thorough assessment of the structure to reveal its actual condition. This process involves accurately presenting the current condition of a historic building as it existed in the past

and employing various techniques to restore it while preserving its heritage significance (Ali, et al., 2023). Restoration aims to bring the current fabric of a place to a known previous state by removing accretions or reassembling existing components without introducing new materials. Any replacement of missing restoration elements should be substantiated by documentation, references, studies and comprehensive examinations. Therefore, this approach is suitable only when there is sufficient evidence of an earlier state of the fabric.

c) Reconstruction

Reconstruction is a process that aims to return a place to a known earlier state and is distinct from restoration in that it introduces new material into the fabric. This conservation approach can be used to reconstruct a part or the entirety of a building that has been demolished or deteriorated. Recycled materials from other sources may be incorporated into the new material. Reconstruction should be undertaken when documentary and physical evidence allow accurate reconstruction without speculation, representing vanished or non-surviving aspects of a property. The accurate replication of historic features and materials, encompassing materials, style, colour and texture, ensures that the rebuilt property resembles the appearance of the historic building that no longer exists, without detriment to any place of cultural significance.

d) Rehabilitation

Rehabilitation stands as a broad conservation field dedicated to preserving the significant features of heritage buildings, encompassing historical, architectural and cultural values (Kamal, 1970). It goes beyond mere alteration and adaptation, incorporating activities like renovation, extension, improvement, conversion, modernisation and reparation to address deteriorated heritage buildings. The rehabilitation process involves altering and repairing the heritage building, ensuring it becomes efficiently functional while retaining its historical significance.

e) Adaptive Re-use

The adaptive reuse approach involves the transformation of a disused or ineffective building into a new structure with minimal physical alterations while preserving its architectural significance. Adaptive re-use also involves any modification to a building to alter its capacity, function or performance, adapting it to new conditions or requirements (Douglas, 2006). Wilkinson and Reed (2008) and Bullen and Love (2011) state that adaptive reuse approaches enable communities, governments, and developers to reduce the

environmental, social, and economic costs associated with ongoing urban development and expansion. The adaptive re-use of buildings contributes significantly to environmental sustainability. This impact is even more pronounced when applied to historical buildings, as it extends the structure's lifespan by eliminating demolition waste and conserving embodied energy (the energy consumed throughout all processes related to building production) and is widely acknowledged for its ability to reduce low carbon emissions, mitigate climate change and foster sustainable development (Yung & Chan, 2012). Beyond its environmental advantages, this approach transforms heritage buildings into accessible and usable spaces, fostering sustainable regeneration within an area.

Preserving and reusing heritage buildings yield valuable social benefits to communities that appreciate them. Communities will increasingly recognise their own 'historical identities' and local culture through the preservation of heritage significance sites, serving as a lasting benefit for future generations, culminating in cultural continuity within the communities.

RESEARCH METHODOLOGY

The research methodology applied in this study is grounded in a qualitative approach, chosen for its capacity to offer rich descriptions of complex phenomena and track distinctive or unforeseen occurrences (Sofaer, 1999). The data collection techniques utilised in this study include (i) site observation and (ii) semi-structured interviews.

Site Observation

In this research, site observation played a crucial role in understanding how elements in the buildings were preserved and conserved, and the condition of these elements was observed. This method facilitated the analysis of observational data using an inspection checklist. Subsequently, an inspection checklist was developed based on guidelines (**Table 1**) to ensure comprehensive coverage. The site observation was conducted in Ipoh Old Town, Perak, a historical area housing a total of 1,540 heritage buildings comprising categories 1 and 2. The study focuses specifically on institutional and religious facilities, consisting of five (5) units of heritage buildings (Category 1), chosen for their accessibility and openness for interviews data collection.

Table 1: Compliancy of Heritage Building Conservation Works Guidelines Inspection Checklist

Element	Guideline		Compliance
	Design	Explanation	
Walls	Original features should be retained and restored as original.	New additions are not allowed. The original material, original construction technique/method shall be maintained in the process of recovery (if necessary).	Amendments for the purpose of appropriate reuse of a building are allowed if the external appearance conditions of the building are not affected or changed.
Building	Every building is unique in terms of culture and art and it must be nurtured to maintain each of its uniqueness.	The original building materials should be maintained, the repair works should comply with the original composition and the original construction method.	<ul style="list-style-type: none"> The use of concrete material for conservation work is not allowed. Works must be under the supervision of a qualified conservator. HIA
Material	All conservation works should comply to guidelines with original material with correct composition.	Missing and damaged elements should be replaced by the same size, type, design and material.	<ul style="list-style-type: none"> Laboratory tests required. HIA
Modification and Addition	-	Modification and additions are not allowed.	Amendments in the interior may be allowed, subject to the approval of the council.
Internal Space	The original features should be maintained and repaired and rebuilt.	Additional elements are not allowed.	Amendments to a building to appropriately reuse it will be allowed as long as the building's external appearance is not affected or changed.

Table 1 continued

Element	Guideline		Compliance
	Design	Explanation	
Internal Space	The original features should be maintained, repaired, and rebuilt.	Additional elements are not allowed.	Amendments to a building to appropriately reuse it will be allowed as long as the building's external appearance is not affected or changed.
Door	The original decoration and size of the gate and wall should be maintained and rebuilt as the original or with material corresponding to the original material.	Avoid any obstacles in front of the door such as bus stop, parking and others.	<ul style="list-style-type: none"> The decoration should be maintained both on the inside of the lot and on the outside. Conservation works should use the original technique.
Floors	The original material for the floor should be maintained and built with material corresponding to the original material.	The original materials are important to identify the cultural origins of a civilization. Every effort is to be taken to understand the cultural importance.	-
Arrangement of tiles and decorative elements of the roof	Roof decoration elements should use traditional origin material; the details of the roof should be maintained and built as original with the original installation methods.	The original method of tiles installation method and pattern of tiles should be maintained.	The colour, method, material & profile should be consistent with the original.

Source: Researcher (2023)

a) St Michael Institution

St. Michael Institution is one of the oldest schools in Perak, with its establishment dating back to 1912. The architect responsible for the design of St Michael Institution was ‘Father Vernier-Auguste’, renowned for his work on other significant structures, including the ‘Chapel of St. Francis’ Institution’ in Melaka and ‘St. John Institution’ in Kuala Lumpur.

b) Masjid India Muslim

Masjid India Muslim, built in 1905, carries a rich history intertwined with the labour of Indian workers brought in by a wealthy Indian Muslim tycoon Shaik Adam Mohammad Ghaus. This mosque, completed in 1908, stands as a testament to architectural influences from the Diwan-i-Khas at the Red Fort in Delhi, which reflects “Chitya Indian” or Moghul-style architecture.

c) Pa Lo Ku Miao

Founded in 1872, Pa Lo Ku Miao stands as the oldest Chinese temple in Ipoh. Located in Kampung Paloh on the west bank of the Kinta River, this temple boasts a rich history. The area in front of the temple, once known as the people’s park, served as a recreational space where individuals gathered for leisure activities.

d) Masjid Panglima Kinta

Constructed in 1898 by Dato’ Panglima Kinta Mohammed Yusof, Masjid Panglima Kinta is a distinctive mosque reflecting architectural influences from the British colonial era, blending Mughal and neo-architectural styles. Recognising its historical significance, this mosque received heritage status under the National Heritage Act 2005 (Act 645) in the year 2000.

e) Masjid Kampung Paloh

Built in 1912 on Jalan Datoh, Masjid Kampung Paloh bears historical significance as it was constructed during the Frank Swettenham administration by Wan Muhammad Saleh, the Penghulus Superintendent and Assistant Land Revenue Collector. The mosque’s construction was facilitated by the contributions of two affluent individuals, including Long Kassim.

Semi-structured Interview

The semi-structured interview method involves posing questions within a predefined framework, targeting local authority officers and caretakers of selected heritage buildings. Structured question aims to delve into their experiences with conservation approaches and their perspectives on heritage



buildings. These interviews, lasting approximately 30 to 45 minutes each, were recorded to aid in analysing responses. A set of structured questions guided the discussions with interviewees, shedding light on conservation approaches and challenges for the selected heritage buildings:

- Conservation approaches being adopted in heritage building (Category 1).
- Challenges in the process of conserving heritage buildings (Category 1) in Ipoh Old Town.
- Regularity of heritage building conservation process carried out.
- Process and procedure to execute conservation work (e.g HIA requirement)

ANALYSIS AND DISCUSSION

This section outlines the conservation approaches undertaken by each heritage building, aligning with the guidelines outlined in the Ipoh Old Town Special Area Plan 2020. The range of actions includes preservation, restoration, reconstruction, rehabilitation, adaptive re-use and their various combinations. These conservation methods are rooted in historical and cultural considerations, aiming to ensure the sustained preservation of the selected heritage buildings, as listed in **Table 2**.




Table 2: The Conservation Approaches Adopted to Sustain the Selected Heritage Buildings

Heritage Building	Conservation Approaches	Justification
<p style="text-align: center;">St Michael Institution</p> 	<p style="text-align: center;">Rehabilitation</p> <hr/> <p style="text-align: center;">Preservation</p>	<p>St Michael Institution (SMI) implemented the rehabilitation approach by extending buildings behind the heritage building façade. This extension, introduced in 1970, reflects a new development within the institution area, increasing the capacity of usage.</p> <hr/> <p>The preservation of the heritage building façade includes the application of new paint, while the windows have been retained in their original pattern.</p>
<p style="text-align: center;">Masjid India Muslim</p> 	<p style="text-align: center;">Rehabilitation</p> <hr/> <p style="text-align: center;">Restoration</p>	<p>Masjid India Muslim underwent an extension in front of the mosque 80 years ago. This extension improved the heritage building, enhancing its capacity to accommodate the needs of the mosque.</p> <hr/> <p>The main gate of the mosque has been restored to its original façade, including the wall, without adding any new elements.</p>

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Heritage Building	Conservation Approaches	Justification
	Preservation	The application of new paint was implemented to preserve the walls from peeling paint and dampness.

Table 2 continued

Heritage Building	Conservation Approaches	Justification
Pa Lo Ku Miao 	Rehabilitation	A building extension beside the temple represents a minor development within the temple area to increase capacity usage while maximising the retention of the main architectural building.
	Restoration	The conservation plan of Pa Lo Ku Miao includes protecting wood, roof tiles, and unique structures to safeguard its heritage significance.
	Preservation	The internal structure of the temple is preserved through painting actions and conservation treatments to protect the walls from dampness and peeling paint.
Masjid Panglima Kinta 	Reconstruction	The mosque's right elevation minaret was struck by lightning in 2011, leading to its reconstruction by the Ipoh City Council (MBI). This involved new brickwork and repairs to the crown, facilitated by a crane.
	Rehabilitation	A new building called the Gallery Masjid Panglima Kinta was constructed beside the masjid, serving as a showroom for the history of Masjid Panglima Kinta.
	Preservation	The internal space of the mosque's elements, including the rose window and doors in the prayer hall, has been preserved through painting to prevent paint peeling and retard deterioration.
Masjid Kampung Paloh 	Rehabilitation	The floor material in the mosque was changed from marble tiles to carpet because the original Italian marble tiles could not be replaced.
	Preservation	To maintain the original wood windows, a preservation approach has been implemented through painting to prevent deterioration.

Source: Author (2023)

Preservation and rehabilitation are predominantly used to sustain the heritage buildings, effectively slowing down deterioration and addressing dilapidation. Preservation, focusing on preventing decay over time, proves to be the most effective and essential approach. Meanwhile, rehabilitation involves actions like renovation, extension and improvement on heritage buildings.

Based on site observations, past renovations and extensions aimed at expanding building capacity indicate the effectiveness of preservation and rehabilitation in sustaining heritage buildings. However, the restoration approach adopted in Masjid India Muslim and Pa Lo Ku Miao, while challenging, emphasises acquiring original materials without introducing new ones to ensure authenticity and respect for heritage significance. Over time, the challenge arises as many original materials used in the past have become scarce or non-existent, making it difficult to find them today. The adaptive re-use approach is not applied in any of the selected heritage buildings as this approach involves changing the function of a building to adapt to new needs. The selected heritage buildings have altered facilities and physical components but have not changed their function to accommodate new needs.

Evaluation on the compliance of the building elements namely door, floor, tiles arrangement and decorative elements of the roof, structure of roof, wall, building material and internal space with conservation guideline indicates that some heritage buildings do not comply with the floor element guideline, mainly due to challenges in obtaining the original material for replacement. Nonetheless, the existing guidelines in the Ipoh Old Town Special Area Plan are deemed too general and lack detailed guidance. Consequently, contractors may not refer to or follow the conservation guidelines, as they are not legally binding and lack technical manuals and recommendations for conservation work.

Furthermore, according to semi-structured interviews with the heritage building caretakers, Heritage Impact Assessment Reports (HIA) were not prepared before conservation work. This is attributed to the classification of their conservation work as minor, focusing on preservation and having minimal impact on the building façade. Consequently, HIA exemptions are considered for small conservation or repair works that aim to restore heritage buildings without diminishing their significance, as well as for renovations or the installation of new fabrics. The semi-structured interview with caretakers of the heritage buildings revealed three (3) prominent challenges, which include skilled workers, materials and financial constraints (**Table 3**). Notably, a major challenge is the scarcity of skilled workers in the field of conservation. Caretakers expressed concerns about the contractor lacking expertise in conserving heritage buildings. During the interviews, it became apparent that many contractors rely on their general experience and knowledge in renovation rather than possessing specialised skills in conservation, particularly in approaches like restoration. This

deficiency arises from contractors' unfamiliarity with the original structure, the heritage building's condition and past construction methods. The implications of this skill shortage are detrimental, potentially impacting the quality of conservation work, as unprofessional workers may struggle to address specific conservation issues due to a lack of technical expertise.

Table 3: Conservation Approaches Challenges of St Michael Institution

Heritage Building	Adopted Conservation Approaches	Challenges
St Michael Institution	Rehabilitation	<ul style="list-style-type: none"> • Lack of expertise
	Preservation	<ul style="list-style-type: none"> • Difficulty in obtaining original material for replacement • Financial problem
Masjid India Muslim	Rehabilitation	<ul style="list-style-type: none"> • Lack of expertise
	Restoration	<ul style="list-style-type: none"> • Difficulty in obtaining original material for replacement
Pa Lo Ku Miao	Preservation	<ul style="list-style-type: none"> • Financial problem
	Rehabilitation	<ul style="list-style-type: none"> • Lack of important data
	Restoration	<ul style="list-style-type: none"> • Lack of expertise
Masjid Panglima Kinta	Preservation	<ul style="list-style-type: none"> • Choosing the right materials to match the original building • Financial problem
	Reconstruction	<ul style="list-style-type: none"> • Complication of reconstruction work
Masjid Kampung Paloh	Rehabilitation	<ul style="list-style-type: none"> • Financial problem
	Preservation	<ul style="list-style-type: none"> • Unable to obtain original material required to preserve the building
Masjid Kampung Paloh	Preservation	<ul style="list-style-type: none"> • Limitation of material options
	Rehabilitation	<ul style="list-style-type: none"> • Difficulty in identifying the required material

Source: Author (2023)

The challenge of acquiring original materials for heritage building conservation presents another challenge. Matching new materials with the original ones proves difficult, requiring contractors to ensure compatibility through testing for factors like strength, texture, scale and form. This challenge has implications for the authenticity of heritage buildings, hindering restoration efforts that necessitate original materials. Furthermore, financial constraints emerge as a third challenge in conservation works. Site observations and semi-structured interviews revealed instances where original materials were not replaced due to high costs. Although alternatives from other old building materials might be compatible, the lack of financial support hinders their acquisition. This financial challenge impacts the timely completion of conservation work.

CONCLUSION

In summary, this article highlights the various methods, materials and construction processes used in conservation projects, catering to the unique architecture of heritage buildings. Four (4) out of six (5) conservation approaches – preservation, restoration, reconstruction and rehabilitation – are observed in the selected heritage buildings in Ipoh Old Town. However, the adaptive reuse approach is deemed unsuitable. The assessment of guideline compliance reveals a lack of awareness among building owners regarding the importance and intent of conservation guidelines. The study underscores that all selected heritage buildings in Ipoh Old Town have undergone modifications and additions to expand their capacity, primarily driven by current needs. The identified challenges in implementing conservation approaches include; (i) lack of expertise; (ii) difficulty in obtaining original materials for replacement; and (iii) financial constraints, with financial issues posing the most significant challenge. This research focuses exclusively on conservation approaches in sustaining heritage buildings in Ipoh Old Town. To strengthen this study, future research could benefit from further research in the following subjects:

- 1) Future studies should obtain perspectives from conservation contractors to ensure adherence to guidelines.
- 2) There is a need to suggest recommendations to address conservation challenges.

REFERENCES

- Abdul Latip, N., Md Sani@Abd Rahim, N., Haron, S. H., Hamzah, R., Abu Bakar, A.N., & Umar, M.U. (2018). Visitors Perspectives Towards the Conservation of Heritage Building: The Case Study of Gurney Paragon Mall, Penang. *Planning Malaysia*, 16(8), 143 –154.
- Ali, W. N. W., Zin, I. N. M., Ibrahim, A., Halim, A. Z. A., Ishak, N. R., & Talkis, N. A. (2023). Determining the Intervention Strategy for Heritage Shophouse Facades at Ipoh, Perak. *Planning Malaysia*, 21(2), 275-286.
- Bedate, A., Herrero, L. C., & Sanz, J. Á. (2004). Economic valuation of the cultural heritage: application to four case studies in Spain. *Journal of cultural heritage*, 5(1), 101-111.
- Bullen, P.A., & Love, P.E. (2011). Adaptive re-use of heritage buildings. *Structural survey*, 9(5), 411–421.
- Douglas, J. (2006). *Building adaptation*. Routledge.
- Feilden, B. (2007). *Conservation of historic buildings*: Routledge.
- Harun, S.N. (2011). Heritage building conservation in Malaysia: Experience and challenges. *Procedia Engineering*, 20, 41-53.
- Hashim, N.H.N, Dali, M.M., & Alias, A. (2023). Developing Sustainable Urban Regeneration (SUR) Evaluation Method for the Malaysian Context. *Planning Malaysia*, 21(6), 100–115.

- ICOMOS (International Council on Monuments and Sites) (2020). ICOMOS Annual Report 2020. Retrieved from https://www.icomos.org/images/DOCUMENTS/Secretariat/2021/Annual_report_2020/RA_ICOMOS-2020_EN_FINAL_BD.pdf (Munos & Vinas, 2005)
- JWN (Jabatan Warisan Negara). 2023. *Garis Panduan Perancangan Pemuliharaan Kawasan dan Bangunan Warisan (PeWARIS)*, Kementerian Pembangunan Kerajaan Tempatan.
- Kamal, D.K.S. (2005). *Rehabilitation of Heritage Buildings in Malaysia*. Proceedings: International Seminar on Modern Urban and Architectural Heritage in Jakarta, 5 December 2005, Museum Bank Mandiri, Jakarta, Indonesia, 126-133.
- Lazim, F.S.M. & Said, S.Y. (2020). View of Townscape Appraisal and Contribution of Physical Features Towards the Character of Ipoh Old Town. *Planning Malaysia*, 18(12).
- Li, L. & Tang, Y. (2024). Towards the Contemporary Conservation of Cultural Heritages: An Overview of Their Conservation History. *Heritage*, 7(1), 175–192. <https://doi.org/10.3390/heritage7010009>.
- PlanMalaysia (Jabatan Perancangan Bandar dan Desa) (2020). Special Area Plan Old Town Ipoh. http://epublisiti.townplan.gov.my/turun/rkk_srilumpur/ringkasan.pdf
- Sofaer, S. (1999). Qualitative methods: what are they and why use them? *Health services research*, 34(5 Pt 2), 1101.
- UNDP (United Nation Development Programme). (2024). Goal 11 - Sustainable Cities and Communities. <https://www.undp.org/sustainable-development-goals/sustainable-cities-and-communities>
- Wilkinson, S., & Reed, R. (2008). *Property development*. Routledge.
- Ying, L. J., Hassan, L. S., Abidin, N. Z., Lim, N. H. H., & Hasnan, L. (2023). Assessing the Social Values of Historical Waterfront: A Case Study of Sungai Petani, Kedah, Malaysia. *Planning Malaysia*, 21(6), 130-143.
- Yung, E. H., & Chan, E. H. (2012). Implementation challenges to the adaptive re-use of heritage buildings: Towards the goals of sustainable, low carbon cities. *Habitat International*, 36(3), 352-361.

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