

## Functional Transformation of Traditional Houses in Melaka World Heritage Site: A Case Study in Kampung Morten

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### Abstract

This paper examines the functional transformation of traditional Malay houses in Kampung Morten, the sole surviving traditional village within the urban centre of the Melaka World Heritage Site. While tourism adaptation presents crucial economic opportunities, rapid urbanisation and commercial pressure threaten the architectural authenticity and authentic cultural identity of these historical dwellings. Hence, this study aims to investigate the core factors influencing this functional transformation, assess its subsequent impact on structural and interior design and identify the conservation measures implemented by the community. Subsequently, this study employed a qualitative research design, in which data were gathered through purposive sampling via semi-structured interviews with 8 informants, including local homeowners and authorities, along with field observation, and were finally evaluated using thematic analysis. The findings reveal that the transformation is primarily driven by three factors: sentimental desire to sustain the family legacy, immediate structural maintenance needs, and the necessity of economic generation. In addition, the study shows that the structural impacts of this adaptation are minimal and conservative, with the transformation designed for interior space and modern comfort while maintaining key symbolic architectural elements. Finally, sustainable cultural heritage assets can be achieved through regular maintenance, active community collaboration, and informal heritage education aimed at younger generations. In conclusion, the functional transformation of traditional houses in Kampung Morten is carried out sustainably, demonstrating that adaptive heritage management can reconcile contemporary economic needs with the preservation of both tangible and intangible cultural heritage.

**Keywords:** Cultural heritage, functional transformation, Morten village, traditional house, tourism.

Submitted: 10 March 2026

Revised: 15 March 2026

Published: 31 March 2026

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## **Perubahan Fungsi Rumah Tradisional di Melaka Tapak Warisan Dunia: Kajian Kes di Kampung Morten**

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### **Abstrak**

Makalah ini meneliti perubahan fungsi rumah tradisional Melayu di Kampung Morten, satu-satunya perkampungan tradisional yang masih wujud di pusat bandar Tapak Warisan Dunia Melaka. Walaupun adaptasi pelancongan menawarkan peluang ekonomi yang penting, pembandaran pesat dan tekanan komersial mengancam keaslian seni bina dan identiti budaya asal kediaman bersejarah ini. Oleh itu, kajian ini bertujuan mengkaji faktor-faktor utama yang mendorong perubahan fungsi ini, menilai kesannya terhadap struktur dan reka bentuk dalaman serta mengenal pasti langkah-langkah pemuliharaan yang dilaksanakan oleh komuniti. Seterusnya, kajian ini menggunakan reka bentuk penyelidikan kualitatif yang mana data dikumpul melalui pensampelan bertujuan (purposive sampling) menerusi temu bual separa berstruktur bersama lapan informan yang terdiri daripada pemilik rumah dan pihak berkuasa. Kajian ini juga melibatkan pemerhatian lapangan dan seterusnya analisis data menggunakan analisis tematik. Dapatan kajian mendedahkan bahawa transformasi ini didorong oleh tiga faktor: keinginan sentimental untuk mengekalkan legasi keluarga, keperluan segera untuk penyelenggaraan struktur dan keperluan penjanaan ekonomi. Selain itu, kajian ini menunjukkan bahawa kesan penyesuaian ini terhadap struktur adalah minimum dan konservatif dengan transformasi direka bentuk untuk ruang dalaman dan keselesaan moden sambil mengekalkan elemen seni bina simbolik yang utama. Akhir sekali, pengurusan aset warisan budaya yang mampan boleh dicapai melalui penyelenggaraan berkala, kerjasama komuniti yang aktif dan pendidikan warisan tidak formal yang disasarkan kepada generasi muda. Kesimpulannya, transformasi fungsi rumah tradisional di Kampung Morten dilaksanakan secara lestari membuktikan bahawa pengurusan warisan adaptif mampu mengimbangi keperluan ekonomi kontemporari dengan pemeliharaan warisan budaya ketara dan tidak ketara.

**Kata Kunci:** Warisan budaya, perubahan fungsi, Kampung Morten, rumah tradisional, pelancongan

Dihantar: 10 Mac 2026

Disemak: 15 Mac 2026

Diterbit: 31 Mac 2026

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## 1.0 Introduction

Traditional houses are valued as heritage treasures that embody a community's cultural identity. In Melaka, traditional Malay houses are known for their distinctive architectural features, such as elevated structures, intricate wood carvings, and spatial layouts rooted in local cultural traditions (Mohd Sahabuddin, 2016). This architectural design serves both functional and symbolic purposes, reflecting the community's cosmological beliefs, social hierarchy, and traditional practices. It is specifically tailored to respond to the tropical climate, incorporating passive ventilation systems, elevated floors to reduce flooding risk, and extended roof structures for shading and rain protection (Zakiyudin, 2025). Nonetheless, rapid urbanisation and globalisation have altered lifestyle patterns and increasingly threatened the preservation and authenticity of these valuable cultural sites. Many houses have undergone renovations that have compromised their original architectural integrity and cultural significance. This study aims to critically analyse the functional transformation and conservation challenges of traditional Malay houses in Melaka, particularly in Kampung Morten (Mohd Rahil et al., 2020; Yaman et al., 2021).

Kampung Morten, situated in central Melaka, is recognised as the city's sole surviving traditional Malay village. Its designation as a tourist destination has prompted practical and aesthetic modifications to its historic dwellings. While these modern enhancements boost economic potential and visitor comfort, they raise significant heritage conservation concerns. For instance, replacing intricately carved wooden windows with glass panels may compromise architectural authenticity (Ishak et al., 2007; Zainal Abidin & Ismail, 2018). Similarly, substituting traditional timber such as *cengal* or *meranti* with concrete threatens the legacy of traditional construction practices upheld by local artisans (Jabatan Warisan Negara, 2019). Ultimately, the increasing commercialisation of tourism risks eroding not only the tangible architecture but also intangible cultural assets, including communal values, traditional lifestyles, and social connections (Rahman et al., 2015). It is therefore imperative to examine the functional, structural, and interior changes occurring in Kampung Morten to fully comprehend the enduring effects of tourism development on this heritage. Addressing these challenges necessitates a comprehensive strategy that integrates community-based tourism, historical conservation, and cultural education, thereby ensuring the village remains a vibrant embodiment of living heritage amid contemporary urban pressures (Alisa & Ridho, 2020).

### Background of the Study

Traditional Malay houses in Melaka have undergone significant evolution over the generations, influenced by empirical knowledge, community adaptability to environmental conditions, religious beliefs, and social structures. The essential architectural components, such as *tiang* (columns), *rumah ibu* (main house), *serambi* (veranda), and an organised spatial hierarchy, reflect both practical necessities and symbolic meanings (Alauddin & Baharuddin, 2025; Rahmat et al., 2023). The architectural development of Malay dwellings in Melaka has been profoundly shaped by historical interactions during the Malay Sultanate period and subsequent Portuguese, Dutch, and British colonial administrations. Despite these external influences, the fundamental principles of Malay architecture have remained intact, highlighting cultural resilience and adaptability (Mohd Sahabuddin, 2016). Kampung Morten is recognised as a historic village that has undergone significant changes in the use of traditional homes (Che Rose et al., 2016). Originally serving as



residences, some of these homes have been repurposed into homestays, restaurants, mini museums, or cultural centres in response to the tourism industry (Yaman et al., 2021). The trend of homestays modelled on traditional houses has gained popularity, as tourists seek an immersive experience of authentic Malay life. Additionally, some homeowners have transformed their residences into miniature galleries or museums to showcase the history and culture of Kampung Morten, aiming to attract visitors while preserving the community's heritage within a commercial framework (Mat Radzuan & Ahmad, 2020).

While this shift presents economic opportunities (Said et al., 2017; Zakiyudin, 2025), it also raises critical concerns regarding the preservation of cultural heritage and architectural authenticity. In addition, it also faces increasing pressure to conform to contemporary expectations in an effort to provide visitors with an “authentic” Malay cultural experience while accommodating the functional demands imposed by the tropical climate in Malaysia, which have necessitated various structural modifications. These functional transformations commonly include installing air conditioning, replacing traditional wooden flooring with modern tiles, and incorporating a bathroom with a bathtub or showers (Yaman et al., 2021). While such modifications enhance comforts and usability, they inherently compromise the integrity and authenticity of the original architectural form, highlighting the tension between heritage preservation and contemporary adaptation. Furthermore, rising land prices and increased maintenance costs have placed additional strain on original residents, compelling them to sell portions of their properties to investors who prioritise economic gain over cultural preservation (Sukri, 2017). Unfortunately, the processes of globalisation and modern construction trends have diminished the significance attributed to traditional craftsmanship. Contributing factors include escalating maintenance costs, a lack of technical expertise in timber preservation, and a decline in the intergenerational transmission of construction knowledge, all of which exacerbate the degradation of these structures (Che Rose & Khalid, 2017).

In light of these challenges, systematic documentation and scholarly research are imperative to safeguard the architectural and cultural relevance of traditional Malay houses in Melaka, particularly in Kampung Morten (Che Rose & Khalid, 2017). This study aims to examine the factors influencing the functional transformations of traditional houses in Kampung Morten. Furthermore, it seeks to determine the impacts of functional adaptation on the structural and interior elements of traditional houses and finally, to analyse conservation measures to preserve the identity of traditional houses in Kampung Morten.

### **Research Problem**

The traditional Malay houses of Melaka hold considerable cultural and historical significance. However, their architectural authenticity is increasingly threatened by several critical issues. The transformation of these residences into commercial spaces has disrupted the social dynamics of the surrounding neighbourhoods. While modifications in interior design and structural features aim to attract tourism, they potentially jeopardise the historic architectural values that originally defined these structures. Consequently, a conflict has arisen within the community between the imperative to preserve cultural heritage and the desire to capitalise on economic opportunities presented by tourism. Despite the economic potential of tourism, there remains a significant gap in research on the effects of these developments on heritage conservation from the community



perspectives. Key concerns include the potential degradation of architectural authenticity and the loss of the local community's "sense of place" (Mohd Rahil et al., 2020).

Previous studies have underscored the limited involvement of local communities in tourism-related decision-making processes, raising alarm about the influence of external entities and commercial property owners on modifications made without local input (Mat Radzuan & Ahmad, 2020). Although models of community-based, sustainable tourism have been proposed, uncertainties remain regarding their implications for Kampung Morten's traditional houses, particularly regarding social structures, intangible cultural heritage practices, and the technical aspects of preserving original architectural elements (Lisha et al., 2024). This situation underscores the urgent need for focused research into how modernity, social engagement, and community participation can be effectively harmonised to promote sustainable tourism while safeguarding Kampung Morten's unique cultural legacy. To address this research gap, specific objectives have been formulated: identifying the primary factors driving functional changes in traditional houses in Kampung Morten; examining the impacts of structural and interior modifications driven by tourism demands; and developing conservation strategies to preserve the identity of these traditional houses.

## 2.0 Literature Review

Kampung Morten, located in the heart of Melaka, is recognised as the sole remaining traditional Malay village within an urban context (Heritage Malaysia, 2014). This classification highlights the village's significant cultural, historical, and architectural value, particularly through its preservation of traditional Malay houses that reflect local identity, craftsmanship, and social structures. As a case study, Kampung Morten provides valuable insights into the ways heritage sites navigate the dual pressures of urbanisation and tourism, exemplifying a model of reconciliation between conservation efforts and contemporary development (Che Rose & Khalid, 2017). The transformation of Kampung Morten into a tourist destination has led to adaptive reuse, with traditional dwellings converted into homestays, eateries, and cultural centres. While this evolution offers economic benefits, it simultaneously raises concerns regarding the preservation of architectural authenticity and social cohesion (Ishak et al., 2007; Zainal Abidin & Ismail, 2018). The adaptive reuse of historic structures is grounded in the principle of retaining original materials and architectural forms, which is crucial for honouring their cultural significance (Cantell, 2005). Thus, efforts to adapt Kampung Morten for tourism must balance these original values with the tangible need for modern functionality.

Heritage buildings are structures of historical, cultural, and architectural importance that warrant preservation (Harrison, 2012). The legal framework governing these structures includes the National Heritage Act (NHA) 2005, which sets out responsibilities, guidelines, and implications for the conservation of heritage buildings in Malaysia. These regulations define what constitutes heritage buildings and outline restoration processes, conservation criteria, and permissible alteration criteria (Jabatan Warisan Negara, 2019). Furthermore, municipal authorities enforce additional regulations concerning structural modifications, material changes, and commercial adaptations within heritage zones. Understanding this legal backdrop is essential for assessing how Kampung Morten manages the tourism development pressures while adhering to heritage preservation standards. The concept of cultural sustainability highlights that heritage conservation efforts must extend beyond the physical preservation of buildings to encompass the maintenance



of community identity, social practices, and collective memory (Mohd Rahil et al., 2020; Rahman et al., 2015).

The adaptive reuse strategies employed in Kampung Morten, such as its transformation into homestays, restaurants, and cultural centres, are designed to attract tourists while retaining the village's unique character (Che Rose & Khalid, 2017; Zainal Abidin & Ismail, 2018). However, adaptations often involve replacing traditional materials, such as timber, with modern alternatives, such as concrete, and implementing contemporary amenities, as well as reconfiguring spaces for commercial activities (Ishak et al., 2007; Jabatan Warisan Negara, 2019). While these changes enhance functionality and visitor comfort, they pose risks to architectural authenticity and diminish the symbolic value of the heritage structures. In summary, the preservation of both tangible and intangible heritage in Kampung Morten is vital for maintaining community identity and continuity (Harrison, 2012; Mohd Rahil et al., 2020). To effectively balance tourism development with heritage conservation, it is essential to prioritise strategies that uphold the village's cultural integrity while accommodating the economic needs arising from increased tourist engagement.

### **3.0 Research Methodology**

This study employs a qualitative research design focused on Kampung Morten within the UNESCO World Heritage Site of Melaka. This methodology allows for an in-depth examination of the complex socio-cultural phenomena present in their natural context (Yin, 2018). The research investigates the functional transformation of traditional dwellings shaped by the pressures of tourism, thus making the design adept at visualising the contextual realities of Kampung Morten. This village was selected for its designation as a cultural village within an urban setting of World Heritage Site, exemplifying a living heritage environment where traditional Malay houses coexist with tourism-driven adaptations (Heritage Malaysia, 2014; Che Rose & Khalid, 2017). Its strategic location within the core zone of the Melaka WHS significantly shapes tourism growth, making it an ideal site for exploring the tensions between preservation and commercialisation.

The study employs three primary methods for data collection and utilises purposive sampling. This approach includes conducting semi-structured interviews with 8 informants, comprising homeowners, local community members, and personnel. The interviews concluded once the research objectives were met and saturation was achieved, specifically at the sixth interview. The goal of these interviews is to gather insights into participants' perceptions of building modifications, the impacts of tourism, and adherence to regulations. Prior to data collection, participants were informed of the study's objectives and provided informed consent. Throughout the research, strict measures were in place to maintain confidentiality and anonymity, ensuring that all personal identifiers were anonymised in line with established ethical standards (Creswell, 2014). The semi-structured interview format offers flexibility while ensuring consistency in thematic focus. Furthermore, the research involved a review of relevant documents and an examination of pertinent academic literature, as well as previous case studies, to provide context for the findings. Data analysis used thematic analysis to identify recurring patterns in functional transformation, its impact, and the measures taken to preserve traditional Malay houses. This method allows systematic coding and classification of qualitative data, ultimately generating interpretative insights (Braun & Clarke, 2006).



## 4.0 Findings and Discussions

The qualitative data collected from interviews and observations were evaluated using thematic analysis, guided by predetermined themes derived from the study's research objectives. From this analytical process, several key themes and sub-themes emerged regarding the functional use of traditional houses in Kampung Morten, their impacts, and measures to preserve them. These findings are systematically organised into three main sections, which will be subsequently discussed below:

### 4.1 Functional Transformations of Traditional Houses in Kampung Morten

Kampung Morten is known for its traditional Malay houses, which exemplify urban Malay architecture in Melaka. These timber homes are notable for their long or pyramidal roofs and well-thought-out layouts that include *serambis*, verandas, and traditional staircases, serving as both circulation and social spaces that represent Malay customs (Nasir & Wan Teh, 1997; Rahmat et al., 2023). This makes Kampung Morten a significant cultural site that preserves historical values while also promoting education and cultural tourism. Due to its growing popularity as a tourist destination, homeowners have considered renovations, struggling to balance modern needs with the importance of maintaining their cultural heritage. Results show that there are strong factors motivating homeowners to initiate passive transformation of their houses, including sentimental and family legacy, maintenance and structural factors, and economic and income-generating factors.

#### 4.1.1 Sentimental and Family Legacy Factors

Family heritage, sentimental attachment, and symbolic connotations of traditional houses are carried down through generations. Traditional Malay houses symbolise family identity, community memory, and cultural continuity (Nasir & Wan Teh, 1997). In heritage conservation, sentimental value inspires owners to conserve, safeguard, and modify their homes so they stay active rather than abandoned or deteriorated (Rapaport, 1982). Evidence of this factor can be observed through the interview with Informant 1:

This house was transformed into a gallery because my late father had always enjoyed welcoming visitors into our home. He loved sharing stories about our family history and the design of the traditional Malay house with anyone who came to visit. To continue his passion and legacy, our family decided to turn this house into a gallery so that the public can experience the atmosphere of a traditional Malay home and gain a deeper understanding of its history (Informant 1, Interview, Kampung Morten, 2025).



Informant 1 explained that he wanted to honour his late father, who loved hosting visitors and sharing stories about the family history and traditional Malay house architecture, by turning the house into a gallery. This shows how functional modification can preserve sentimental value while keeping the house socially and culturally relevant. Thus, the traditional house is seen as a means of passing on history, culture, and family identity to future generations and tourists. According to Heath (2001), adaptive reuse of heritage structures generally maintains social value and function without damaging the building's original identity. Emotional attachment also affects change (Sukri, 2017). Informant 1's residence has changed function, but the original architecture and layout are kept to honour the family tradition. This technique follows the conservation standards of Jabatan Warisan Negara (2013), which highlight the authenticity and integrity of heritage buildings.

#### 4.1.2 Maintenance and Structural Safety Factors

Traditional dwelling functional alterations also depend on maintenance and structural safety. These variables require homeowners to make adjustments to maintain structural stability, the durability of building materials, and occupant and visitor safety. Weather, humidity, termites, and natural ageing can damage traditional Malay buildings, which are mostly made of wood (Nasir & Wan Teh, 1997). Heritage structures require regular maintenance and targeted repairs to prevent safety issues and structural degradation (Jabatan Warisan Negara, 2013). Informant 2 described this:

The main reason I renovated the house was because its condition had become too deteriorated, with many of the wooden structures damaged by termite infestation. Traditional houses require careful maintenance, and the upkeep costs can be quite high. Therefore, I decided to carry out renovations so that the house could be reused, made safe for occupancy, and preserved instead of being left to deteriorate further (Informant 2, Interview, Kampung Morten, 2025).

Informant 2 said the house's deteriorating physical condition, especially termite damage to the timber, prompted renovation. Traditional Malay houses often degrade structurally, requiring ongoing repair to maintain safety and durability (Nasir & Wan Teh, 1997). Weak or damaged flooring and timber components impair resident comfort and raise safety concerns, especially when guests arrive. That is, Informant 2's renovation was intended to strengthen the building's structure and prevent further deterioration. Heath (2001) agrees that heritage building changes are often driven by safety and structural issues rather than aesthetics. According to Jabatan Warisan Negara (2013), conservation practices allow structural reinforcement and repair work provided they do not materially alter the building's design, layout, or identity. Informant 5 also stressed house structural durability:



For me, renovating this house was not about changing its style or making it overly modern, but rather about preserving its original structure. A traditional wooden house, if not properly maintained, can deteriorate quickly. When I noticed that certain parts were no longer structurally sound, I felt a responsibility to repair them. I have a deep attachment to this house, so the renovations I carried out were mainly to ensure that its original form and structure can be sustained for the long term (Informant 5, Online Interview, 2025).

Informant 5's reaction shows a strong sense of responsibility for the traditional house structure. The refurbishment was done to preserve the original building. Preventive conservation involves early fixes to avert further harm (Orbasli, 2007). Nasir & Wan Teh (1997) also note that timber materials are sensitive to environmental conditions; hence, traditional Malay buildings require attentive maintenance. Informant 7 also stressed the necessity for small home improvements: "This house had not been maintained for a long time, so I felt it was time for me to take care of it and restore it. However, I have ensured that its traditional atmosphere is still preserved" (Informant 7, Online Interview, 2025). Informant 7 said the renovation was needed to rehabilitate a neglected dwelling. Repairing damaged parts and making small adjustments could bring the house back into use while keeping its charm. This emphasises continued use in heritage conservation. Orbasli (2007) says that heritage buildings that are used and maintained are more likely to survive than those that are vacant. Abandoned traditional houses risk losing both their cultural relevance and their structures. Overall, maintenance and structural safety concerns motivate Kampung Morten homeowners to renovate. These conservative changes prioritise structural preservation over modernity.

#### 4.1.3 Economic and Income-Generating Factors

Economic factors also influence Kampung Morten's traditional dwelling functional metamorphosis. These considerations relate to homeowners' need to ensure their homes can generate enough income for upkeep, conservation, and use. Traditional dwellings in heritage tourism locations such as Kampung Morten can generate income through homestays, cultural galleries, and rentals (Ahmad, 1992). Timber-based houses are expensive to maintain, so homeowners often seek other sources of income (Nugraha et al., 2024). Informant 3's response shows this:

Yes, there was definitely an economic factor. When the hostel business declined after COVID, I had to find another way to cover the costs of maintaining the house. A traditional wooden house can deteriorate quickly if not properly cared for. So when I noticed an increase in tourists, I felt that turning it into a homestay was a more suitable option (Informant 3, Interview, Kampung Morten, 2025).



Informant 3 explained that economic concerns became more important after its closure due to the COVID-19 pandemic. A homestay was an alternative way to generate income while maintaining the house. Similar sentiments presented by Informant 4: “Hmm... yes, that was also a factor. As you know, there are quite a number of people here running homestays. So when I saw others doing it, it naturally made me think about it as well” (Informant 4, Online Interview, 2025). The interview excerpts show that economic motivation may be influenced by the tourism environment and other residents. Additionally, Informant 7 further added on the tourism's economic benefits: “Yes, there was definitely an economic influence as well, since many tourists visit Kampung Morten. I felt it would be a missed opportunity if I didn't take advantage of it” (Informant 7, Online Interview, 2025). These interview excerpts suggest that economic factors can support traditional houses if managed well. By earning income from tourism, homeowners can fund repairs and keep their homes occupied. The studies show that the economic characteristics of Kampung Morten homeowners vary. For some informants, income generation drives functional transformation, while for others it sustains maintenance and prevents abandonment. Malay dwellings' traditional architecture is preserved in most alterations.

## 4.2 Impacts of Functional Adaptation on the Structural and Interior Elements of Traditional Houses

Functional adaptation affects the physical structure and internal characteristics of traditional Kampung Morten dwellings as they meet the demands of the tourism industry. Thus, this discussion addresses how these changes affect traditional Malay dwellings while balancing tourism development and heritage conservation. Hence, a few thematic findings emerged regarding the impacts, including minimal structural changes to meet tourism needs, emphasis on preserving key structural elements of the traditional houses, and interior spatial adaptation.

### 4.2.1 Minimal Structural Adaptation to Support Tourism Needs

Minimal structural adaptation involves making minor changes to a traditional house to meet functional, safety, and comfort needs without affecting its architectural form, layout, or character. The philosophy of minimum intervention applies to heritage villages like Kampung Morten, where changes are made only when necessary and carefully to preserve the structure's originality (Jabatan Warisan Negara, 2013). When houses are repurposed as galleries, homestays, or tourist receiving facilities, kitchens, flooring, and front parts are often adapted. Orbasli (2007) and Heath (2001) argue that heritage buildings should retain their basic architectural features while allowing minimal modifications for safety, functionality, and continuity. Informant 1's statement illustrates this approach:

My house hasn't changed much.. only the kitchen area was modified, where I replaced the wooden structure with brick. That was mainly to make it more durable and easier to maintain. The other parts, such as the roof, colours, and overall form, have all been preserved in their



original condition because I want visitors to experience the authentic appearance of a traditional house (Informant 1, Interview, Kampung Morten, 2025).

Based on the excerpts, Informant 1 merely modified the kitchen area, replacing timber with masonry to increase longevity and maintenance. As kitchens are used frequently and exposed to damp, such changes are useful. The source stressed that the roof form, colour palette, and original structure were retained to preserve the historic house's character. The owner understands the necessity of preserving the historic house's physical identity as a heritage treasure. The minimum intervention principle in heritage conservation prioritises modest repair work while preserving the building's identity (Jabatan Warisan Negara, 2013). Preserving the original structure allows tourists to experience the authentic spatial and architectural features of traditional Malay dwellings, which are essential to heritage tourism (Orbasli, 2007). Informant 2 described a structural alteration spurred by urgent safety concerns:

The flooring was the part that underwent the most changes, as it had been severely damaged by termite infestation. Once the wood became weak and softened, even walking on it felt unsafe. At times, it would make unusual sounds, as if it might give way. So I had no choice but to replace and reinforce that section. The rest of the house was kept as it originally was, as I wanted to preserve its traditional appearance (Informant 2, Interview, Kampung Morten, 2025).

The informant explained that termites had significantly damaged the floor, making it unsafe for tenants and visitors. Therefore, structural reinforcement was needed for safety and usage. Despite these restorations, other architectural elements were left in place, demonstrating the owner's dedication to the house's historic appearance. Timber-based traditional Malay dwellings are susceptible to age, humidity, and termite damage and require frequent upkeep. Ishak et al. (2007) note that structural repairs to floors and timber frameworks are appropriate conservation measures if they do not alter the architectural form. Visually visible areas, such as the front façade, showed structural adaptation, as stated by Informant 3:

I made some minor changes to the front part of the house, since that's the first area visitors see when they arrive. If it looks untidy, it gives the impression that the house isn't well maintained. So I repaired the damaged parts and tidied up the area to make it more visually appealing for tourists. However, I retained the original form of the house and did not alter its structure. I only improved its appearance, not changed its identity (Informant 3, Interview, Kampung Morten, 2025).



The informant stressed the importance of keeping the house's front, which greets guests. Improvements were cosmetic rather than structural. Nasir & Wan Teh (1997) stress that traditional Malay home façades are important architectural identities and must be preserved to maintain the authenticity of heritage settlements. Meanwhile, Informant 4 also described family growth-related internal spatial adjustments: "If we look at my house, the rooms and the living area have changed the most" (Informant 4, Online interview, 2025). The informant said the living area and bedrooms were rearranged to suit more family members. These statements indicate functional modifications, rather than structural ones. Rapaport (1982) states that social requirements and living patterns change household space. The findings show that Kampung Morten's structural changes are selected, modest, and conservation-oriented, balancing practical requirements with historical preservation.

#### 4.2.2 Preservation of Key Structural Elements as Heritage Identity

The *serambi* (veranda), staircase, roof structure, timber framework, and spatial layout of traditional Malay houses are intentionally preserved. These elements represent Malay culture, historical continuity, traditional lifestyles, and structural functions (Nasir & Wan Teh, 1997). The heritage village's appearance and culture depend on Kampung Morten's houses (Mohd Rahil et al., 2020). Informant 1 prioritises structural preservation: "Almost all the main parts of my house have remained as they originally were" (Informant 1, Interview in Kampung Morten, 2025). Informant 1 emphasised that the stairs, veranda, roof, and living spaces remained intact. These aspects retain the house's architecture and provide guests with a genuine Malay house experience. In addition, Informant 2 highlighted symbolic elements: "What I kept are definitely the stairs and the attic..." (Informant 2, Interview in Kampung Morten, 2025). Based on the interview excerpts, the staircase and the attic were preserved for historical purposes. The attic contained household belongings and agricultural produce, while the staircase is typical of Malay architecture (Nasir & Wan Teh, 1997).

Furthermore, Informant 3 emphasised house façade preservation: "I have definitely preserved the front part of my house..." (Informant 3, Interview in Kampung Morten, 2025). According to Informant 3, maintaining the façade preserves the house's visual originality and contributes to Kampung Morten's heritage (Mohd Rahil et al., 2020). Meanwhile, Informants 6 and 7 stressed the necessity of living room and veranda maintenance: "I have preserved the living room and the veranda of my house exactly as they were originally" (Informant 6, Online interview, 2025) and "The staircase and the living room" (Informant 7, Online interview, 2025). Malay culture has used these venues (stairs and living room) for hospitality and socialising. These efforts help preserve the house's structure and culture. The findings show that informants agree that the basic structural elements of traditional dwellings are retained, despite minor practical alterations to preserve architectural authenticity and Kampung Morten's heritage village identity.



#### 4.2.3 Interior Spatial Adaptation for Resident and Tourist Comfort

Traditional houses adapt the organisation, size, and functionality of space to meet current living needs while preserving architectural individuality. Traditional Malay houses vary in their living rooms, bedrooms, and kitchens, as they serve domestic and social purposes (Ahmad et al., 2022). These improvements are crucial for visitor receiving areas and homestays (Nugraha et.al., 2024). Informant 4 said: "I actually renovated this house to make guests feel more comfortable..." (Informant 4, Online interview, 2025). The informant 4 indicated the renovations improved visitor comfort by improving space and ventilation. The minor changes improved comfort without altering the house's style. Informant 6 also proposed more practical space layouts: "I renovated it because I wanted the house to look more spacious and comfortable..." (Informant 6, Online interview, 2025). As family numbers and visitors increased, the informant reported that the inside was modified to make it more roomy. These findings support Rapaport's (1982) statement that houses change when they no longer suit modern lifestyles. Hence, adaptive reuse makes heritage buildings relevant without losing their history (Alauddin & Baharuddin, 2025; Bullen & Love, 2011).

### 4.3 Conservation Measures to Preserve the Identity of Traditional Houses in Kampung Morten

It is evident from previous findings that the traditional Kampung Morten homeowners adopt many conservation strategies to preserve the architectural identity and heritage of their dwellings. Heritage village conservation preserves symbolic elements, spatial arrangements, original construction materials, and cultural values of traditional Malay dwellings beyond physical repairs (Nasir & Wan Teh, 1997; Ishak et al., 2007). Jabatan Warisan Negara (2013) also recommends ongoing, attentive, and reasonable conservation to preserve the originality and functionality of heritage buildings. Tourism and urban growth in Kampung Morten force locals to balance modern living with heritage preservation. Since they live in and preserve the village's physical and cultural history, locals' conservation efforts are crucial (Ahmad, 1992). The third research objective evaluates homeowners' conservation behaviours, including regular maintenance, architectural preservation, community engagement, and youth awareness-raising.

#### 4.3.1 Periodic Maintenance and Repair as the Foundation of Conservation

Traditional Malay houses, especially in Kampung Morten, need maintenance and restoration. Traditional wooden houses require ongoing maintenance to prevent decay, moisture damage, and termite infestation (Nasir & Wan Teh, 1997). Large-scale renovations may compromise the authenticity of original architectural components in historical conservation; therefore, regular upkeep is preferable (Orbasli, 2007; Jabatan Warisan Negara, 2013). An interview with Informant 2 supports this approach: "For me, the important thing is to always take care of the house. Do regular maintenance... fix whatever is broken... don't wait too long. If you take care of it consistently, a traditional house can last a long time" (Informant 2, Interview in Kampung Morten, 2025). Informant 2 said traditional



houses require frequent maintenance and repair, as timber requires constant care to last (Mohd Sahabuddin, 2016). The owner knows that termites, tropical conditions, and ageing structures can hasten the disintegration of a historic house if neglected. The informant prioritises preventive conservation by promptly repairing broken objects (Orbasli, 2007). Conservation principles suggest early intervention and minimal alteration to avoid structural changes that could jeopardise architectural authenticity (Jabatan Warisan Negara, 2013). In tourism-oriented Kampung Morten, small-scale maintenance is better than extensive renovations that may damage the appearance of traditional Malay homes.

Maintaining the physical structure and cultural values in community life is essential for conservation (Abdul Aziz et al., 2023). Informant 5 concurred: “In my view, the key is simply to repair the parts that are damaged. Don’t leave them for too long. Preserving a traditional house isn’t difficult... you just need to be diligent in checking its condition” (Informant 5, Online interview, 2025). Informant 5 said that promptly repairing broken parts is the best approach to preserving traditional homes (Mohd Sahabuddin, 2016). Minor defects can generate serious structural concerns in timber houses exposed to environmental and biological hazards. Informant 7 agreed: “The best approach is to carry out regular repairs. As soon as you notice any part starting to deteriorate, fix it immediately. Don’t wait for it to collapse” (Informant 7, Online interview, 2025). Preventive conservation focuses on early maintenance to prolong the life of heritage structures (Orbasli, 2007; Ishak et al., 2007). Institutionally, Informant 8, who is a heritage personnel, said: “For JWN, the best approach is to preserve the original building materials, structural form, and traditional architectural elements. Renovations can be made, but they must follow conservation guidelines” (Informant 8, Online interview, 2025). Historic buildings should be preserved by maintaining original materials, structural forms, and architectural features (Jabatan Warisan Negara, 2013). Alterations must follow conservation standards to safeguard historical and architectural assets (Orbasli, 2007; UNESCO, 2012). Informants 2, 5, 7, and 8 believe that frequent maintenance and repair are ideal for Kampung Morten’s traditional homes. This technique sustainably conserves the architectural character and cultural significance of traditional Malay dwellings through resident knowledge, regular maintenance, and formal conservation regulations (Mohd Rahil et al., 2020).

In conclusion, while tourism introduces contemporary pressures, the adaptation of traditional houses through functional transformation ensures that these structures remain both physically preserved and culturally relevant, thereby preventing abandonment (Alauddin & Baharuddin, 2025; Bullen & Love, 2011). This adaptation is facilitated by alternative income sources, such as homestays and galleries, which enable homeowners to secure the financial resources needed to maintain their properties (Ahmad, 1992; Nugraha et al., 2024).



#### 4.3.2 Community Roles in Conserving Traditional Houses

Heritage villages like Kampung Morten need community involvement to preserve traditional houses, as residents help preserve and pass on village culture and architecture (Nasir & Wan Teh, 1997; Mohd Rahil et al., 2020). To preserve the village's historical identity, communal care, heritage awareness programs and physical improvements may be implemented (Shamsuddin, 2011). Informant 1 said: "For me, the community really needs to work together. If there are gotong-royong programs or heritage visit activities, the villagers themselves will feel a greater responsibility to take care of their own houses" (Informant 1, Interview in Kampung Morten, 2025). The source said community-based programs, such as group cleaning and history excursions, help residents preserve their traditional dwellings. Research shows that direct community involvement in safeguarding heritage villages is crucial for upholding social and cultural values beyond physical conservation (Mat Radzuan & Ahmad, 2020). Meanwhile, Informant 2 stressed teamwork: "From my experience, preservation work becomes much easier when everyone is in agreement" (Informant 2, Interview in Kampung Morten, 2025). Cooperative relationships enable information sharing, mutual aid, and coordinated conservation. This cooperation makes everyone feel more responsible for protecting cultural resources (Nugraha et.al., 2024).

Other informants noted that Kampung Morten residents' engagement in heritage-related programs was high. These programs improve community ties and responsibility for the village's historic landscape while making maintenance easier. Informant 8 emphasised community interaction even more: "From JWN's perspective, the community plays a major role... The residents themselves need to act as custodians of this heritage" (Informant 8, Online interview, 2025). This idea emphasises that local individuals must actively conserve their cultural assets, as government agencies cannot do it alone. This approach follows UNESCO's (2012) community-based heritage management framework, which recognises local communities as vital partners in sustainable conservation and will eventually transform the traditional houses from static historical artefacts into resilient and living heritage assets.

#### 4.3.3 Heritage Awareness and Education for Younger Generations

To preserve traditional houses as cultural historical assets, younger generations must learn about history. In addition to inheriting the houses, Kampung Morten's youth may also maintain the cultural and historical value of traditional Malay architecture. Without exposure and education, these cultural systems may become obsolete in the face of rapid modernisation (Khairuddin, 2022). Informant 1 highlighted concern regarding the decline of youth awareness: "Bagi saya, rumah tradisional macam ni memang lambang identiti Melayu Melaka. Kalau kita tak jaga, satu hari nanti generasi depan langsung tak kenal asal-usul sendiri" (Informant 1, Interview in Kampung Morten, 2025). Based on the interview excerpts, traditional residences also symbolise cultural identity and historical continuity. These houses are considered informal classrooms where the younger



generation can learn about traditional lifestyles and values (Nasir & Wan Teh, 1997). Informant 6 stressed the need for prior experience and engagement from the youth in protecting heritage assets: “Kalau generasi muda tak tengok sendiri rumah tradisional, mereka tak akan faham keunikannya” (Informant 6, Online interview, 2025).

This reinforces the idea that traditional architecture reflects local knowledge from communal experiences and environmental adaptability (Lim, 1997). Seeing heritage assets in person helps younger generations understand the architectural differences. Informant 7 also stressed the future generation's responsibility: “Nenek moyang kita dulu dah lama jaga tradisi ni. Jadi sebagai generasi muda, kita kena sambung usaha mereka” (Informant 7, Online interview, 2025). This shows how future generations continue their ancestors' work to preserve cultural legacy (Nasir & Wan Teh, 1997). Finally, Informant 8 stressed the importance of preserving traditional dwellings for the nation: “Memelihara rumah tradisional penting sebab ia bukan saja milik individu, tapi sebahagian daripada warisan negara” (Informant 8, Online interview, 2025). Communities and organisations must preserve traditional homes as part of the country's cultural heritage. Overall, these results suggest that Kampung Morten's traditional dwellings are protected in ways beyond physical preservation. Preserving cultural identity and historical knowledge for future generations requires awareness of heritage and participation in education among younger generations (UNESCO, 2003).

## 5.0 Conclusion

This study demonstrates that cultural, structural, and economic factors drive the functional transformation of the traditional houses in Kampung Morten. Despite these pressures, homeowners make conservative modifications, adapting their interiors for modern comfort while strictly preserving the core architectural identity of their homes. To sustain these living heritage sites, continuous periodic maintenance, active community teamwork, and informal education for younger generations are essential. This study significantly contributes to effective adaptive heritage management by showing that, when managed carefully, tourism adaptation can help preserve authentic cultural values. However, it is crucial to emphasise that economic priorities should not overshadow preservation, as this is a critical policy implication. Authorities must work to establish a collaborative framework by providing homeowners with financial incentives and technical advisory services to support sustainable preservation. While this study offers valuable insights, its scope is limited to a single case study in Kampung Morten, which may not fully represent the pressures faced by other heritage villages. Therefore, further comparative research across various traditional villages in Malaysia is needed to develop a more comprehensive framework. Additionally, more studies should focus on exploring the use of digital documentation and experiential learning platforms to engage the younger generation in preserving traditional construction knowledge and cultural identity.



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