

Redefining Endogenous Bugis Limas Houses in Johor – Religious Aspects

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ABSTRACT

This study highlights the neglect of intrinsic architectural values crucial to defining the identity of places within contemporary Malaysian communities and practices. Often overlooked, these values, termed ‘Endogenous Architecture’, stem from the traditional wisdom of culturally advanced societies and shape the physical appearance of traditional dwellings. The thesis posits that these values can redefine Malaysian architectural identity. It focuses on Johor’s traditional Limas houses, heavily influenced by the Bugis ethnic migrant community from Sulawesi. Data were collected through open-ended interviews with experts and authorities and case studies in Pontian, Johor, where traditional Bugis Limas houses, known for their timeless preservation and influential endogenous attributes, were analysed. The research categorises the common endogenous denominators of these houses into cultural, religious, and behavioural aspects, with religion identified as the most dominant due to the Bugis community’s strict adherence to Islamic rulings. Findings show that the implicit values of Bugis Limas houses remain relevant, as the community still adheres to these traditional principles. The study illustrates how these values can inform essential design guidelines, encouraging architects to integrate traditional Malay elements to create a meaningful Malaysian architectural identity. By incorporating these principles

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into their designs, architects can authentically reflect Malaysian identity in buildings, fostering a connection to cultural heritage for present and future generations.

INTRODUCTION

This study arises from issues of oblivious indifference among contemporary Malaysian communities and the architectural practice of the intrinsic values of architecture in defining the identity of a place. Their roles are either neglected or kept in the archives of heritage studies collection. Modern buildings are being designed irrespective of the surrounding context, producing buildings impervious of the local identity, nor having a sense of 'home' and 'belonging'. This scenario proves that our precious, intricate architectural heritage is not being regarded in contemporary Malaysian building designs. Despite the diversity of our country's cultural heritage heirlooms, Malaysians are deceptively ignoring our invaluable heritage wisdom to produce a meaningful contemporary interpretation of housing and buildings. If such indifferent attitude persists, our national cultural and architectural heritage is always threatened by abandonment and extinction. Hitherto, their viability would never be fully explored, nor ever be understood.

LITERATURE REVIEW

The identity crisis has become a relentless architectural phenomenon in our country for decades. Even after 60 years of independence, the issue of true national architectural identity is still being debated among scholars, academicians, and practitioners alike. Zakaria A.Z et al. (2021) elucidated that over the past three (3) decades, the national architectural identity crisis has progressively evolved, yet it remains unresolved by the responsible authorities. This crisis has significantly impacted the philosophical dimensions of design and the broader Malaysian society. Contemporary society must comprehend its cultural identity to indirectly highlight the nation's distinctiveness. The imperative for practicing architects to recognise that prevailing contemporary architecture without a national identity, may not always serve as the most suitable precedent for articulating a nation's architectural narrative. This is particularly pertinent given the country's unique identity and the significance of regionalism, as expounded by Chong Wei Yee et al. (2021). Tan Sri Dr. Rais Yatim (Bernama, 2017) related his concerns about the crucial identity crisis of Malaysian architecture in the *Sinar Harian* article and emphasised that governmental buildings' architecture should interpret the identity of each state to manifest their implicit essences and peculiarities (thesis emphasis). Such architectural design would not only become a part of our cultural heritage conservation effort but would also become a valuable historical monument for the generations to come.

From the perspective of architectural education, Mohammad Tajuddin M. R. (2015) highlighted the reason was perhaps that of the current Malaysian architectural schools' programs, which do not value the importance of philosophical education in architectural education which was also elucidated by M.Surat et al. (2010). Consequently, prospective future architects, would not grasp the significance of the intrinsic values of heritage architecture; let alone interpret, or apply them in their design interventions. The inability of architectural students to appreciate the Islamic values in producing Islamic architecture design schemes, was possible because the students were unaffected by the symbolic meanings behind it. This ignorance to decipher and illuminate philosophical thoughts in resolving issues based on contextual and social-cultural conditions; neither being sensitive, appreciative, nor having a sense of local pride, may result in the least meaningful design solutions. Essentially, architects should be able to understand not only the sciences behind a design scheme but also the arts, philosophy, and contextual background of the chosen site, to holistically resolve the issues while representing the local's identity.

Although there are some feasible efforts to conserve the inimitable architectural heritage findings by academic institutions, such as the Centre for Study of the Built Environment for The Malay World (KALAM), UTM and the Heritage Lab, Kulliyah of Architecture and Environmental Design's (KAED),

IIUM; such efforts may not be sufficient without interpreting the findings of our traditional architectural values to be put into useful pragmatic purposes in the contemporary architectural practice, for people to appreciate and experience. As Rasmussen, S.E (1999) claims:

"On the whole, art should not be explained; it must be experienced...possible to help others experience it..."

This justifies the necessity to implement conscious and conscientious objectives and an in-depth study on the viability of relevant traditional elements and their implications on contemporary Malaysian building design (thesis emphasis). The outcome would certainly entail the appreciation of traditional architecture, subsequently leading to a national effort to preserve and utilise heritage wisdom to resolve the identity crisis issues in contemporary Malaysian architecture.

Hence, this paper attempts to promote an appreciation of our intrinsic architectural heritage with a focus on endogenous elements portrayed by the Bugis society in their traditional Limas Houses in Johor. Wan Hashimah (2013) claims that the majority of archipelago population had embraced Islam including the Bugis. Islam is known for the variety of Islamic principles and mazhab being practised. The Bugis were the strong believers of the mazhab Syafii and identified themselves as Sunni Muslims. However, their religious tradition beliefs could not be forsaken totally due to the fact that this religious tradition contains the value of religious belief which can provide emotional satisfaction to the believers manifested in the physical formation of the traditional Bugis Limas Houses that were apparent. As narrated by Wan Hashimah (2011):

"Nevertheless, for some Bugis their practice also includes offerings to spirits of ancestors and deceased powerful personages. For those who fully adhered to Islamic teachings, the offerings in the form of food are no longer made and changed to a worship of Allah."

The research defines endogenous architecture as the intrinsic, intricate values inherited from within the traditional wisdom of a culturally civilised society. The implicit orders are indeed the causes of the physical appearance of a traditional dwelling architecture. The endogenous elements of the implicit orders are categorised into three (3): (1) Culture, which dictates the intangible influences deriving the architectural manifestations. It is divided into the Social and Belief systems, since the Bugis community has applied their traditional beliefs, especially regarding house erection, space planning, house form, and intricate decorations; (2) Religion, which includes the religious traditions, as the Bugis are devoted Muslims, who follow Islamic ruling and its cosmology strictly regarding privacy, segregated space planning, hierarchical system, and functions. Until now, the endogenous values of Bugis Limas houses are still relevant because the implicit orders are still being abided by the community; and (3) Behavior, which is the cumulative act of cultural aspects, which influences the formation of the traditional Bugis Limas Houses' house form. Table below highlights the variables for future analysis of this study (Table 1 and Table 2):

Table 1. The Variables Extracted for the Future Analysis of This Study

Endogenous Aspects	Influences
1 Culture Aspect	Dictates the intangible manifestation, which influence the architectural product of one's house. The aspect is categorised as: (i)Social (ii)Belief
2 Religious Aspect	Including indigenous religious traditions, such as Cosmological belief, especially with regard to house form. With the arrival of Islam, the zonings of the houses were further enhanced
3 Behavioural aspect	A cumulative act of the cultural aspects. Influences the formation of the traditional Bugis Limas House's form

Source: Authors' (2024)

Table 2. Summary of the Bugis Endogenous Aspects That Will be Highlighted Throughout This Research.

Endogenous Aspects	Influences	Outcome
1 Culture Aspect	Dictates the intangible manifestation, which influence the architectural product of one's house. The aspect is categorised as: (i)Social (ii)Belief	(i)Social: Segregation of spaces as of similar to the traditional Bugis social understanding between the 'Kapolo' (residence of the house), and the 'To Laing' (outsiders) The physical formation of gables that depicts the status or the hierarchical placement of the family. (ii)Belief: Ceremonial activities pertaining to the erection of the Tiang Seri (<i>Sumange</i>). Tradition of days or dates that are determined to build a home by the Bugis Calendar, before the construction of the house. Usage of ornamental designs or carvings in the decorations of the house.
2 Religious Aspect	Including indigenous religious traditions, such as Cosmological belief, especially with regard to house form. With the arrival of Islam, the zonings of the houses were further enhanced	Segregation of female from male, in the form of organisation of spaces. Application of Cosmological Belief which are the three (3) levels: Upper world (<i>Rakkaeng</i>) Middle World (<i>Ale Bola</i>) Underworld (<i>Awaso</i>) Orientation of building towards the Kiblah as it is thought to maximise the area when carrying out congregational prayers.
3 Behavioural aspect	A cumulative act of the cultural aspects. Influences the formation of the traditional Bugis Limas House's form. Influences the formation of the traditional Bugis Limas House's form	Spaces or organisation that play any role in building one's discipline in their behavioural system.

Source: Authors (2024)

METHODOLOGY

The authentic architectural qualities will be measured through the identification of endogenous and exogenous elements through 'Descriptive Qualitative Analysis' or 'Descriptive Comparative Analysis' where the data collected is a source of well-grounded, rich descriptions and explanations in a local context, which is the identity of traditional Johor-Bugis Limas Houses Design. To achieve the objectives, the following methodologies are adopted:

- (i) Literature reviews of related articles on endogenous design elements, or components from traditional Malay architecture, which exhibit their potential to be accommodated into the design of modern buildings.
- (ii) Open-ended interviews (personal communication) with experts (Tuan Haji Zulkarnain bin Asmawi: Head of Department of Yayasan Warisan Johor), authorities (En. Azhar Mohd Noor: Project team member of Cahaya Jauhar Bhd. for Johor New State Administrative Centre). , and owners of traditional Limas Houses (Case Study A & B) on endogenous design elements or components that exhibit the potential to be accommodated into the design of modern buildings; This method is to ensure the preservation of authentic knowledge, the adaptability of the endogenous elements in contemporary design, validated community insights and lastly cultural and architectural continuity. Through these interviews, the research gains a robust, qualitative foundation, ensuring that the adaptation of Bugis religious elements into contemporary architecture is both respectful and informed by those most familiar with their meaning and value

Empirical case studies on Traditional Johor Limas houses in the province of Pontian, Johor, which utilises these elements.

Site Study

The data collections are based on case studies and interviews with relevant individuals and owners of the houses. The manifestation of endogenous elements in the traditional Bugis Limas house in Johor is predominantly influenced by inherited traditions of the prominent Bugis ethnic group, originally migrated from Sulawesi, Indonesia. Centuries-old ancestral traditional Bugis Limas houses in Johor were selected as case study models. The case studies consist of four (4) traditional Johor Limas Houses, whereby three (3) of the case studies are recognised by KALAM and the Yayasan Warisan Johor. The case studies are divided into two (2). 'Case Studies A' consists of two (2) authentic Johor Limas Houses constructed in the 1950's and the 1930's. It was chosen due to its location where the majority of the Bugis people reside presently and the historical background. 'Case Studies B' has undergone renovation with a modern technology application.

Studies of morphological values of each case study were carried out alongside cultural mapping of traditional Johor Limas Houses deducted to which suited to the context of the discussion (i.e. Bugis owners specifically). All information was gathered from KALAM, UTM.

The selected case studies are intended to:

- (i) Further, enhance the objectives of the study,
- (ii) Analyse the elements of the Bugis Culture (endogenous aspects) that still exist in the authentic traditional Johor Limas Houses.

Analyse the elements of the Bugis Culture that are still being applied or preserved in the present (modern) Johor Limas Houses.



Fig. 1. 'Case Study A' consists of two (2) authentic traditional Johor Limas Houses; Rumah Haji Mahmood bin Haji Abd. Kadir, 1959 (Left) and Tuan Haji Md Nor bin Daeng Telibah, 1930 (Right)

Source: Authors (2024)

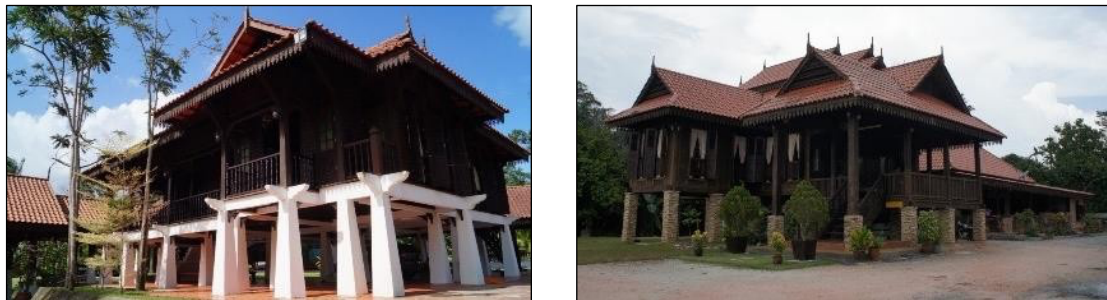


Fig. 2. 'Case Study B' consists of two (2) modified current traditional Johor Limas House; Rumah Daeng Hadadek, 2012 (Left) and Rumah Renee Moi, 2012 (Right)

Source: Author (2024)

Cultural Aspects: Social and Beliefs

To determine: (1) if there are segregation of spaces similar to the traditional Bugis social understanding between the 'Kapolo' (residents of the house), and the 'To Laing' (outsiders); and (2) if there are any physical formation of the gables that depict the status or the hierarchical placement of the family

To determine: (1) if there were any ceremonial activities about the erection of the Tiang Seri which is the Sumange of the house; (2) To analyse if the tradition of days or dates that are determined to build a home by the Bugis calendar is still being practiced before the construction of the house; and (3) To determine if there are any usage of ornamental designs or carvings in the decorations of the house.

Religious Aspects

To determine: (1) if the Segregation of females from males, as the teachings of Islam is still being practiced in the form of organisation of spaces; (2) To analyse if the residents of the house were aware of the application of the Islamic cosmology which are the three (3) levels namely the upper world (Rakkaeng), Middle World (Ale Bola) and the Underworld (Awaso). Orientation of building towards the Kiblah as it maximises the area when carrying out congregational prayers.

Behavioural Aspects

To determine if there are any certain spaces or organisation that play any role in building one's discipline in their behavioural system.

The findings portray that the significant endogenous aspects influencing the physical representation of the architectural characteristics are cultural, religious, and behavioural. The most domineering is the religious aspect, as the Bugis are devoted Muslims. For centuries, the community has persisted in sustaining the endogenous existence, because its elements are parallel with the teachings of Islam. Its significance is preserved until now. Islamic rulings and guidelines refined the cultural social, beliefs, and behavioural aspects even more and made the practice much clearer as it applies to the present way of life.

Table 3. The Variables Established from Literature Reviews for The Comparative Analysis of This Study

	ASPECTS	INFLUENCES
1	Culture Aspect	Dictates the intangible influences, in terms of (i) Social - customs, rituals, & tradition (ii) Belief - beliefs which derive from the architectural manifestations of one's house.
2	Religious Aspect	Religious traditions are based on Islamic ruling and cosmology. Influence the spatial planning, zoning & hierarchical system.
3	Behavioural aspect	A cumulative act of the cultural aspects. Influence the house form of the traditional Bugis Limas House.

Source: Authors (2024)

RESULTS AND DISCUSSION

The findings of the research data collection were analysed and synthesised and summarised. The purpose of the analysis is to review and discover the traditional Bugis cultures that have assimilated into the traditional Johor Limas Houses. The most dominant endogenous aspects assimilated into the architectural manifestation of the traditional Johor Limas houses have been determined as the religious aspect.

Concerning Table 2, and cross-referencing the literature reviews made, the interview can be synthesised as follows:

Table 4. Synthesis of the Interview (Expert) With Cross-reference to Literature Reviews

Data	Tuan Haji Dzulkarnain Asmawi	Wan Teh et al. (2011)	Surat, M. (2006)	Similarities	Synthesis
Origins of Limas Houses	Limas Houses were from Palembang	-	Influenced by the houses in the Riau-Lingga Island (Palembang)	√	Due to the mass coming and going from the Malay Archipelago, where the Nusantara people. Being in the same geographical location with a similar climate, the final product of the design of the house is alike.
Meaning of 'Limas'	from the word ' <i>Lima</i> ' (five) which was distorted into <i>Limas</i>	a corrupted word from the Malay word ' <i>Lima</i> ' meaning 'five'	-	√	The word ' <i>Limas</i> ' originated from the Malay Land, influenced by the physical structure of the roof, their local culture, and way of life, and brought a symbolic meaning behind the house itself for the Malay people.
	Originates from the word ' <i>Lima</i> ' (five) referring to the ' <i>Lima Perabung</i> ' (five ridges) or the five areas of the Limas House	-	Refers to the roof of the house with five ridges shaped like a pyramid	√	
	' <i>Limas</i> ' originated from the concept of ' <i>Lima Emas</i> ', taken from the five ridges of the roof which had a symbolic meaning ' <i>Lima Kemuliaan</i> ' the 'The Five honors'	-	' <i>Lima Emas</i> ' due to the reason that the Rumah Limas were only for those who could afford imported tiled roofs in the roof construction.	0	
	The word ' <i>Limas</i> ' means ' <i>timba</i> ' which is a bucket to retrieve water from a well	-	The meaning of ' <i>timba</i> ' or ' <i>takir</i> ' or a bucket that was made out of a banana leaf, tapered and shaped similar to that of a pyramid form.	√	
Distinct differences	Differences due to progress and the facilities that are provided	-	The design of the Limas Houses also depended on the activities carried out.	√	The design of Limas houses depended on the activities that the owner carried out which differed from one (1) province to another.
	On stilts are due to function wise. Tools are kept under the house which is dedicated for storage purposes.	-	This area was also known as <i>Pagar Musang</i> . Carpentry works acted as fences protecting the belongings of the owner.	√	The area below the houses functioned as an area to store away tools that were about the activities that differentiate throughout the province of Johor, sometimes decorated as fences to deter wild animals.

	Intricate carvings and certain construction methods show the level of differences in their status	-	Intricate ornamentation designs were inspired by a flower namely ' <i>Bunga Parengreng</i> ' which is spread throughout most areas of the house.	√	The level of status is portrayed through the intricate carvings of the house as the owner could afford to pay carpenters to produce intricate carpentry work to be displayed.
The Layout of Traditional Johor Limas House	Consists of five (5) main areas: <i>Serambi</i> <i>Anjung</i> <i>Ruang Ibu</i> <i>Rumah Dapur</i> <i>Pelantar</i>	The Limas House consisted of five (5) main areas, usually depending on the affordability of the individual.	-	√	Traditionally the Limas houses favoured practicality and opted for an open floor concept, but as modifications were made, additional rooms were added to cater to the activities and the privacy of residents of the house especially after the advent of Islam in the 17 th century.
	During the earlier emergence of the traditional Johor Limas Houses, the Malay people favoured more practicality (open floor concept)	Favoured open floor concept within the house which could be used for various purposes and activities, but as modifications were made they were more functionally oriented.	-	√	
√ Similarities	0 No Similarities		- Not Applicable		

Source: Authors (2024)

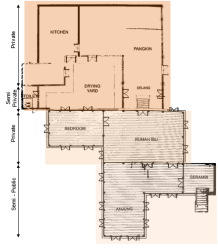
















Concerning Table 2 and Table 3, it can be synthesised that the most dominant Bugis cultural aspect found pertaining to the proposed variables are as follows:

Table 5. Synthesis of the Overall Case Studies Against the Variables

	Rumah Haji Mahmood bin Haji. Abd. Kadir (1959)	Tuan Haji Md Noor bin Daeng Telibah (1930)	Rumah Daeng Hadadek (2012)	Rumah Renee Moi (2012)
Cultural Aspects				
(a) Social				
Space Planning and Zonings	√	√	√	0
Roof Formation (Gables)	√	√	√	0
(b) Beliefs				
The erection of the <i>Tiang Seri</i>	-	-	√	0
Days that are determined by the erection of the house	-	-	√	0
Application of fretworks	√	√	√	√
Religious aspects				
The three (3) Cosmological levels: Vertical Hierarchy formation	√	√	√	√
The physical gender separation in privacy	√	√	√	√
Orientation of building towards <i>Qiblah</i>	0	0	0	0
Behavioural aspects				
Spatial organization	√	√	√	0
Physical Orientation and Movement	√	√	√	0
Privacy	√	√	√	√

Source: Author (2024)

Table 6. Synthesis of the Overall Case Studies Against the Variables with Images

	Rumah Haji Mahmood bin Haji. Abd. Kadir (1959)	Tuan Haji Md Noor bin Daeng Telibah (1930)	Rumah Daeng Hadadek (2012)	Rumah Renee Moi (2012)
1. Cultural Aspects				
(a) Social Space Planning and Zonings				0
Roof Formation (Gables)				0
(b) Beliefs				
The erection of the <i>Tiang Seri</i>	0	0	Ceremonies only in line with the teachings of Islam	0
Days that are determined by the erection of the house	0	0	Only in line with the teachings of Islam	0
Application of fretworks				
2. Religious aspects				
The three (3) Cosmological levels: Vertical Hierarchy formation				
The physical gender separation in privacy				0
Orientation towards <i>Qiblah</i>	0	0	0	n/a

3. Behavioural aspects				
Spatial organisation				n/a
Physical Orientation and Movement				n/a
Privacy	✓	✓	✓	✓

Source: Authors (2024)

Renee Moi's house was eventually converted into a homestay and catering as an event space with water park activities on the seven (7) acre land. However other endogenous architectural elements were taken into consideration due to the manifestation and fretworks applied throughout the architectural design and the owner's Bugis cultural background understanding.

CONCLUSIONS

The findings demonstrated the ingenuity of Bugis endogenous elements that may be incorporated into contemporary buildings with local identity design considerations. Based on the research objectives:

- (i) The study has attempted to identify the architectural manifestations of traditional Bugis culture. The author has elucidated the architectural features of the traditional Bugis house, which portray the essence of endogenous forces, from which the author has derived from the theoretical framework. The Traditional Bugis Limas Houses Consists of five (5) main areas (Serambi, Anjung, Ruang Ibu, Rumah Dapur, Pelantar) usually depending on the affordability of the individual. Traditionally the houses favoured practicality and an open floor concept, but as modifications were made, additional rooms were added to cater to the activities and the privacy of residents of the house especially after the advent of Islam in the 17th century.
- (ii) It was also established that the most influential endogenous elements of the Bugis culture, in transforming the architectural manifestation is the 'Religious Aspects', which consist of the cosmological three (3) layers, the physical gender separation in space planning and zoning; privacy; the ornamentation of geometric and floral carvings. The cultural aspects influence the zonings, the gable roof formation, and the Behavioural aspect. This includes the spatial organisations in response to the physical behavioural system or movement.

(iii) Based on the four (4) case studies carried out, the researcher has established four (4) dominant endogenous aspects, which are still being practiced by the Bugis community. These endogenous aspects are religious, social, and behavioural. For centuries, they have persisted in sustaining their existence within the Bugis community, since these elements are parallel with the teachings of Islam. Islam refined these aspects even more and made the practice much clearer as it applies to the present way of life as they were obliged to the teachings

The research findings may guide the construction industry’s policymakers toward making conscious design strategies given the significance of endogenous qualities in their physical manifestations of the built environment to promote a sense of home and identity. The following table (Table 5) demonstrates the dominant endogenous element (Religious) of the traditional Bugis Limas Houses, which the research recommends to be adopted as fundamental design decision making guidelines for the local authorities and construction industry’s professionals establishing the authentic architectural identity for Johor:

Table 7. Synthesis of the Overall Case Studies Against the Variables with Images

Religious Aspects		
1 Physical Gender Separation in Privacy		<p>Physical Separation The design must concentrate on a much-refined area of the segregation between the private and public areas as to avoid intrusion of privacy of the end users. (The five [5] main areas). A stronger segregation involving genders besides the public and private areas, must be applied.</p>
2 Fretworks	<p>The physical gender and privacy separation in space planning and zoning.</p>	<p>Screenings Proper screenings involving gender-based spaces, such as the Surau, the bathrooms, for a comfortable environment for end users to manoeuvre and control. Screenings and fretworks not only provide a separation, but also emit light and ventilation through curvilinear or geometric patterns and carvings.</p>

The floral carvings and fretworks from the previous case studies.

Source: Authors (2024)

In addition, both functional and intrinsic elements of the traditional architecture may be adopted to portray architectural characteristics, or local identity for any Malaysian buildings. This holistic paradigm should be redefined, reclaimed, and sustained for the present and future generations to reconnect with their

cultural identity and architectural heritage.

The young generations must be exposed to visual appreciation, and education through the physical architectural aspects to inculcate the youths' understanding of the endogenous (intangible) aspects. The Bugis migration from their archipelago origin had brought along their own cultural and traditional knowledge, which was continuously interpreted and transformed into the physical manifestation of the traditional Johor Limas house form and in the notion of 'home'. Physical materials may be diminished and weathered through time, but, the practice of profound cultural understanding, and a sense of appreciation would last for the next generation.

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CONFLICT OF INTEREST STATEMENT

The authors declare no conflict of interest in the research and agree that this research was conducted in the absence of self-benefits or financial conflicts.

AUTHORS' CONTRIBUTIONS

Liyana Mahfuzah Mohd For conceptualised the research idea, wrote, and analysed study data, designed the methodology, and investigated and collected the data. Aida Kesuma Azmin and Hailane Salam supervised the research progress and revisions and approved the article submission. Fatmah Adhilah Mustapha Kamal provided the information on the data analysed. Muhammad Firdaus Mohamed Rafie, Azri Ibrahim and Kamal Mohd Idris was involved in carrying out the research's critical review, commentary, and revisions.

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