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Architectural Evolution of Heritage Masjid in Negeri Sembilan: Masjid Jamek Tanah Datar

Siti Azira Abd Rahim^{1,2}, Noor Fatehah Mat So'od³, 'Atiqah Nadiyah Mohamad Hanafiah⁴, Syahrul Rahmat⁵

¹ Faculty of Engineering and Quantity Surveying, INTI International University, Malaysia

² Faculty of Engineering and Built Environment, Universiti Sains Islam Malaysia, Malaysia

³ School of Architecture and Built Environment, Faculty of Engineering and Built Environment, UCSI University, Malaysia,

⁴ Faculty of Architecture and Built Environment, City University Malaysia, Malaysia

⁵ Islamic Communication and Broadcasting Department, STAIN Sultan Abdurrahman Kepulauan Riau, Bintan, Indonesia

sitiazira.rahim@newinti.edu.my, fatehah@ucsiuniversity.edu.my, atiqah.nadiyah@city.edu.my, syahrul_rahmat@stainkepri.ac.id
Tel : +60 11-1280 0861

Abstract.

The architecture of heritage masjids reflects the physical context to depict the local community's engagement in terms of social, cultural, and behavioral manifestations. The Negeri Sembilan Heritage Masjid's disappearance highlights the need to safeguard cultural heritage. This study intends to present the original, extended layout and the current architectural evolution of the heritage masjid in Negeri Sembilan, Malaysia. This study demonstrates how the evolution and transformation of heritage masjids display distinct concepts and characteristics of extension as a result of the local community's social and cultural needs. This research includes recommendations for the architects and conservators to manage the legacy of the heritage masjid conservation in the future to sustain the cities among the communities.

Keywords: Architectural Evolution; Heritage Masjid Influence; Cultural Heritage

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1.0 Introduction

This paper intends to examine the architectural development of the Negeri Sembilan Heritage Masjid while promoting sustainable development. It will discuss how the layout, structure, and roof shape of the heritage building have changed over time, which affects the architectural design of the heritage masjid. Zafrullah et al. (2015) stated that the sacredness of the masjid's space relates to how the neighborhood is viewed and how people behave in public, which contributes to altering perceptions, architecture, society, and scientific institutions. Discovering our past through the masjid will give us a platform to interpret the role that tradition and culture have played in certain areas. Heritage masjid evolution is used to describe the alterations in buildings or other structures over time while maintaining their historical, cultural, and aesthetic value. Heritage masjids are also frequently safeguarded and preserved because they are valuable in representing a specific period, style, or cultural character. Masjids, in particular, must be appropriately maintained and appreciated, and this demands both the participation of the local community and the users (Aziz A. et al., 2019; Rahim et al., 2021).

Negeri Sembilan has its uniqueness with its Adat Perpatih. Adat Perpatih, in a nutshell, is a social code based on family units, and it also encompasses all aspects, including organizational, political, economic, and legal facets (Jamil, 2012; M. Taib, 2012). 'Adat Perpatih, ' also known as the matrilineal kinship structure, influenced the design of vernacular architecture in Negeri Sembilan.

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Concerning the way of life of the people who have been practicing Adat Perpatih for generations, each building structure that was constructed has its values and philosophy.

1.1 Research Aim and Objectives

The study aims to examine the physical condition of the Masjid Jamek Tanah Datar, Rembau, Negeri Sembilan, and its originality, extended layout and architectural evolution while promoting sustainable growth. Several objectives were developed to achieve the goals, including determining the current state of the chosen heritage masjid, identifying the original and extended design of the layout, and studying the architectural evolution. Furthermore, the research on heritage masjids will benefit society by offering in-depth knowledge about traditional historical masjids in Negeri Sembilan. This occurred as a result of heritage masjids losing their architectural value and significance.

1.2 Significance of the study

The architectural form and characteristics of heritage buildings are essential factors that must be evaluated to maintain the sustainability of the architectural evolution of the layout and structure, which significantly influence how the buildings are seen visually. The originality of the building component must be preserved and maintained yearly, and authorities or communities must control the modifications to preserve the unique characteristics of the heritage buildings.

2.0 Literature Review

Islam was introduced to the Malay Archipelago by traders from the Arab, Persian, and Indian nations when they dominated trade on the Selat Melaka. According to Sharyzee et al. (2018), the masjid has had a significant influence on the social and intellectual development of the Malay peoples since Islam is the main religion in the Malay Peninsula, beginning from the 16th century. During those days, the masjid's role was to teach as well as serve as the focal point for Islamic education. The gradual spread of Islam through the region from the 13th century onwards introduced another vital set of architectural influences. However, Islam does not lead to the change or introduction of new building features, but it is reinterpreting the existing architectural form with Islam and Muslim requirements. Nangkula et al. (2010) stated that masjids older than 100 years in Malaysia can be categorized into three types: Vernacular Architecture from Traditional Masjids, Sino-Eclectic Masjids, and Classic European/ Neo-Colonial Masjids. Recent findings by M. Sojak S. D. et al., 2019, masjid development, can be categorized into six phases, which are the traditional era, pre-colonial era, colonial era, modern era, post-modern era, and global era. This research will focus on the development of the heritage masjid in Rembau, Negeri Sembilan, due to its uniqueness and how the building evolved through time.

2.1 The Architectural Evolution of Heritage Masjid

Norwina et al. (n.d) acknowledged that the earliest masjid in the Malay Archipelago was constructed using vernacular style, including bamboo walls, timber beams and columns, and an arrangement that could be transformed to fit an extensive congregation under one roof. The layout design of the masjid is square in design and minimal in planning, which symbolises the function of the structure. It was inspired by the first major masjid in Islam, which include masjid Quba, Madinah in Hijaz (Masjid of the prophet), masjididil haram, and masjid Al-Aqsa. The main masjid building is situated on a central platform in the center of the square-shaped structure. The enclosure walls are decorated and are low. The serambi, a smaller auxiliary structure used for social gatherings, academic pursuits, and the call to prayer, is located in front of the masjid on the east side. The main structure of some vernacular masjid is known as tiang seri. It is the first four columns to be erected during construction. The four columns will support the topmost roof structure, and expansion can be done by adding more columns around the tiang seri. The main prayer hall consists of Mimbar and Mihrab. Mihrab is the recessed part of the wall that faces the Qiblah, as an indication of which direction should the makmum face when performing salat. Mimbar, on the other hand, is the seat for the imam to give sermons during Friday prayer. The roof is a structure on top of a building that gives shade to the interior space. The multi-tiered pyramidal (bumbung limas) roofs are in odd numbers. The gap between the roof tiers gives an excellent opportunity for air ventilation and natural lighting. The number of tiers reflects the importance of the masjid. The meru, or symbolic mountain, has been linked to odd-numbered tiered pyramidal roofs, which have been said to symbolize the ascent to heaven or nirvana (Norwina et al., n.d.). The top roof is usually crowned with a finial called a roof crown. Perigi, or well, was the source of water in the old days. The water from the perigi is collected in kolah, and it is used for daily activities such as washing and bathing. In a vernacular masjid, the toilet and ablution area typically have a kolah and gayung is provided. Newer ones have piping system with a tap for ablution.

The decoration is influenced by the diversity of factors in the masjid's architecture. The decoration in a common masjid serves as a reminder of Allah's magnificence as the one and only. The usage of human and animal figures is forbidden in Islam. As a result, vernacular masjid ornaments frequently feature floral patterns. Another popular form of adornment is Islamic calligraphy. These decorations are frequently seen on the woodwork. It takes architectural cues from Arabic design. Other patterns are also visible, frequently carved in abstract and complicated patterns to improve the functionality of the elements, including ventilation panels, wall panels, railings, and partitions (Shafri, n.d.).

2.2 The Evolution of Heritage Building Towards Sustainable Societies

The evolution and transformation of the masjid in Malaysia are a result of the complex relationship of historical, cultural, and architectural influences from the traditional era and colonial to the post-independence era. As a result of significant Islamic heritage in Malaysia, the

masjid evolved through different architectural styles, modern technology, and societal changes. Square floor plan, raised floor on post, verandah (serambi), principal column (tiang seri), multi-tiered pyramidal roof (bumbung limas), traditional construction technology, building materials, and combination of façade and interior elements are among the nine elements and characteristics as mentioned by Ariff Shah M. et al. (2016) found to be distinctive to vernacular masjid in Malaysia.

Mohd Azizi N et al., 2016 described the importance of distinguishing between new additions and changes made to a historic building and preserving as much of the original fabric as feasible when conserving it. Significant alteration is permitted as long as it enhances and respects the character of the existing building as well as has architectural and historic significance. PERZIM, Malacca has established the guidelines for all heritage masjids in Melaka to control the extension of their masjid. The originality of the masjid is still intact and preserved today. However, no framework or guidelines exist for controlling the heritage masjid in Negeri Sembilan. As a result, abandonment and decay occurred over time.

2.3 The overview of Masjid Jamek Tanah Datar in Rembau, Negeri Sembilan

This masjid was completed at the end of the 18th century and was built from 1905 to 1909. The name of the founder is Tuan Haji Said Bin Haji Bali. Masjid Jamek Tanah Datar is the oldest in the Rembau district. According to Ustaz Haji Hasan bin Haji Muhammad who is the 4th generation founder of Masjid Jamek Tanah Datar, the construction of this masjid was made as a result of the mutual collaboration of 8 surrounding villages in the Rembau district. During that time, the carpentry work or 'Tukang' was done by the villagers themselves, using their carpentry skills without the aid of machine technology. The construction cost is obtained through courtesy donations from the villagers and some other parties. Based on history, Rembau was the first district to be established in Negeri Sembilan. It was initially the place where the Minangkabau people from Sumatra first landed. The 'Adat perpatih' was brought in by the Minangkabau people known as 'Perantau.' Then, they opened a village and married the natives in that area. They bring the culture and customs to suit Negeri Sembilan's people and influence their architectural design through the traditional house and masjid designs.



Fig. 1 : The recent pictures of Old Masjid Jamek Tanah Datar, Rembau (Entrance, signage and main entrance to hall)
(Source: Author, 2023)

2.4 Cultural and custom influences towards heritage masjid in Negeri Sembilan

According to Ahmad (1999), four main variables have an impact on the architectural design of vernacular masjids: the climatic condition, the accessibility of building materials, the quality of the craftsmanship, and ethnic and cultural background. Negeri Sembilan is synonymous with Adat Pepatih and has been practiced for generations. The Minangkabau people from west Sumatra began writing the history of Negeri Sembilan in the 15th and 16th centuries. They arrived in this land while the Melaka Malay Sultanate was at its strongest. The Adat Perpatih system remains the symbol of the Minangkabau people's identity despite modernization and the emergence of foreign cultures. As regards benefits for future generations, there are several measures to protect and promote these traditions.

The uniqueness of the Masjid Jamek Tanah Datar symbolizes the practice of 'Adat Perpatih' in Negeri Sembilan. The design represents various meanings that are often associated with the identity of Adat Perpatih customs and culture practiced by the community. It is linked with design forms such as orientation, spatial layout, floor components, pole structure, and a variety of decorations or ornamentations in a Negeri Sembilan traditional Malay house. Most of the Mihrab area in the heritage masjid in Negeri Sembilan normally follows the design of 'Bumbung panjang'. Few masjids have unique characteristics of 'Buah Buton/ Bergantung,' which symbolizes the 'Tauhid' and 'Rukun Islam.'

2.5 The basic form and characteristics of Masjid Jamek Tanah Datar in Rembau, Negeri Sembilan



Fig. 2: The recent pictures of masjid characteristics (Tiang Seri, ornamentation, 'Kolah', traditional staircase, wooden wall, window and door)
(Source: Author, 2023)

The primary characteristics of a heritage masjid in the Negeri Sembilan, as shown in Fig. 2, consist of the ornamentation, 'Kolah'/Wudhu' area, concrete/ wooden traditional staircase, and the Tiang Seri' as the central column. The method of construction of the heritage masjid typically uses tongue and groove such as 'Tanggap lubang dan puting,' 'Tanggap lekak T,' and 'Lekak Palang (refer to Fig. 3). In addition, the traditional carvings found in the Rembau area use plant or floral motifs and calligraphy. After this masjid was

renovated, many carvings and the decoration of this mosque were destroyed. Only a few carvings are left, which is the filigree that is on the mihrab part only. Ornamentation and a variety of motifs are among the most essential elements in traditional buildings. The use of this wood carving symbolizes the wisdom of the Malay people and the values that were applied to the carved art.



Fig. 3: Traditional tanggam construction on the roof of Masjid Jamek Tanah Datar
(Source: Author, 2023)

3.0 Methodology

The selection of the case study is based on the uniqueness of the design characteristics of the masjid that relate to their customs and culture. The study adopted in this research used a qualitative method by applying a case study approach to identify (1) the original and extended design of the layout and (2) the current architectural evolution of heritage masjids, which affects their functions and societal responsibility in Negeri Sembilan. One heritage masjid with a thorough analysis of direct and structured techniques of data collection has been explored. As a result, this study investigates qualitative data methodologies such as

1. peer-reviewed academic journal articles,
2. visual observation of the physical state of the house, and
3. Interviews and recordings entail gathering data on the physical features of particular parts that are important in architectural measured drawings.

3.1 A document review

A document review was conducted to identify the architectural evolution of the heritage masjid in Negeri Sembilan. The document reviews included a content analysis of secondary data gathered from various sources, including peer-reviewed academic journal articles, conference proceedings, textbooks, governing organizations, and Ph.D. theses. The selection of masjid is made from a secondary source via documentation from JHEAINS, KAWANS, Politeknik Port Dickson, National Archive (Arkib Negara), Jabatan Warisan Negara (JWN), Badan Warisan Malaysia (BWM), Negeri Sembilan museum department, and other related resources.

3.2 Observational physical data acquisition

Cameras, measured drawings, and technical sketches are used to capture primary data. To meet a critical requirement, namely the possession of a unique detailing on proportion and measurement, the researcher has taken photographs of every perspective, including the primary elements (structure) and secondary elements (door, window and detailings). The observation focuses on the masjid's construction, space layout, organisation, and detailings, which demonstrate the extension of the masjids over the years.

3.3 Interviews

The interview conducted with the imams and the Negeri Sembilan Museum department yielded information concerning the masjid, including its historical context, unique features, and spatial extensions. The expansion of this masjid was a response to the social and cultural requirements of the local community in the region.

4.0 Findings

The results have identified (1) the original and extended design of the layout and (2) the current architectural evolution of heritage masjids, which affects their functions and societal responsibility in Negeri Sembilan. The influence of society significantly influences the extension of masjid designs, as seen in the findings. These social and cultural elements are portrayed in the masjid's planning and spatial arrangement, which produce a unique Islamic architecture. Table 1 shows the findings of the physical attribution of Heritage Masjid Tanah Datar, that have gone through architectural evolution.

4.1 Original forms and characteristics of Masjid Jamek Tanah Datar, Rembau

The construction of this heritage masjid focuses on religious factors and social relations with the community to strengthen their relationship. The layout of the heritage masjid is being extended due to the increase in population. The masjid area contains two areas: the central area is the Mihrab and praying hall. The use of the minbar/mihrab is significant in addition to the layout in which it faces the Qiblah. This prayer hall is also known as a multi-functional space where all the activities will take place.



Fig. 4: The original layout of Masjid Jamek Tanah Datar, Rembau
(Source: Author, 2023)

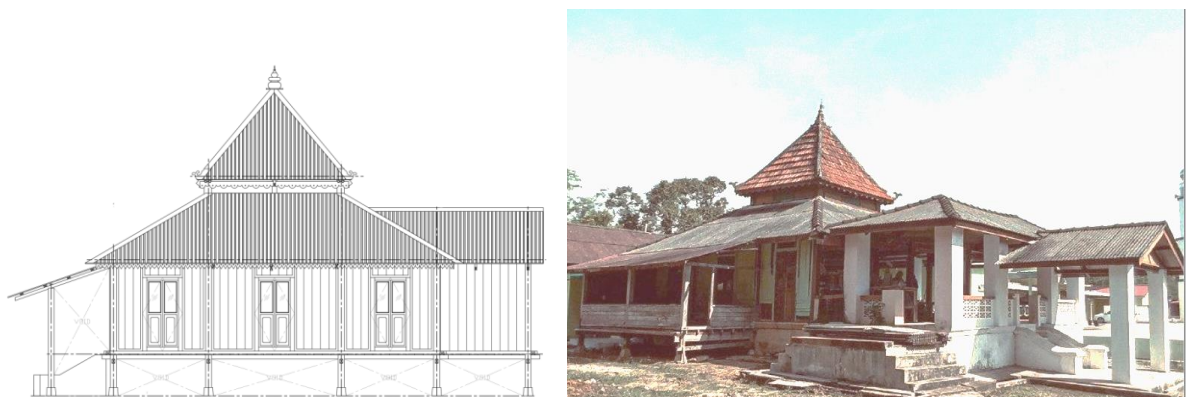


Fig. 6 :The elevation of Masjid Jamek Tanah Datar, Rembau (2D drawing and original state of Masjid)
(Source: Author, 2023)

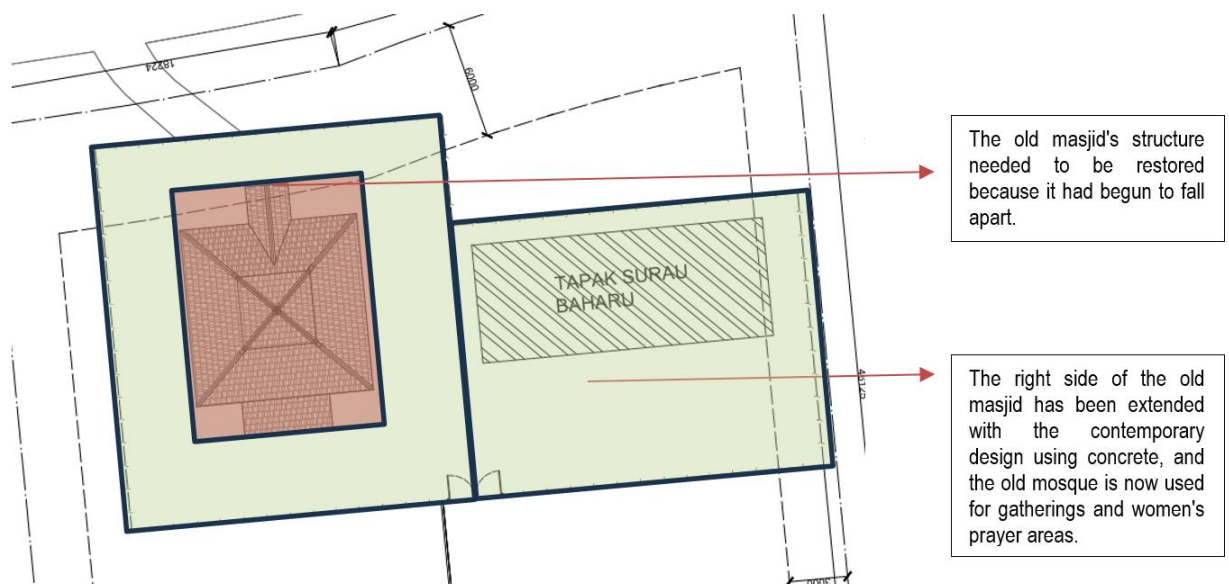


Fig. 5: The recent layout of the heritage masjid that has evolved due to increased population and community growth
(Source: Author, 2023)

The preservation of the original area will contribute to the sustainability of their cities and communities. If it is developed carelessly, this outstanding asset could be lost and forgotten. Historical significance is attached to monuments, artifacts, and heritage sites. They

act as tangible reflections of the past, allowing us to learn from our past, appreciate the evolution of society as a whole, and respect the achievements and tribulations of earlier generations. Heritage masjids, therefore, have historical significance of their own and distinctive designs that exhibit the qualities of the local culture, which are preserved for the current generations and will be passed down to the succeeding generations.

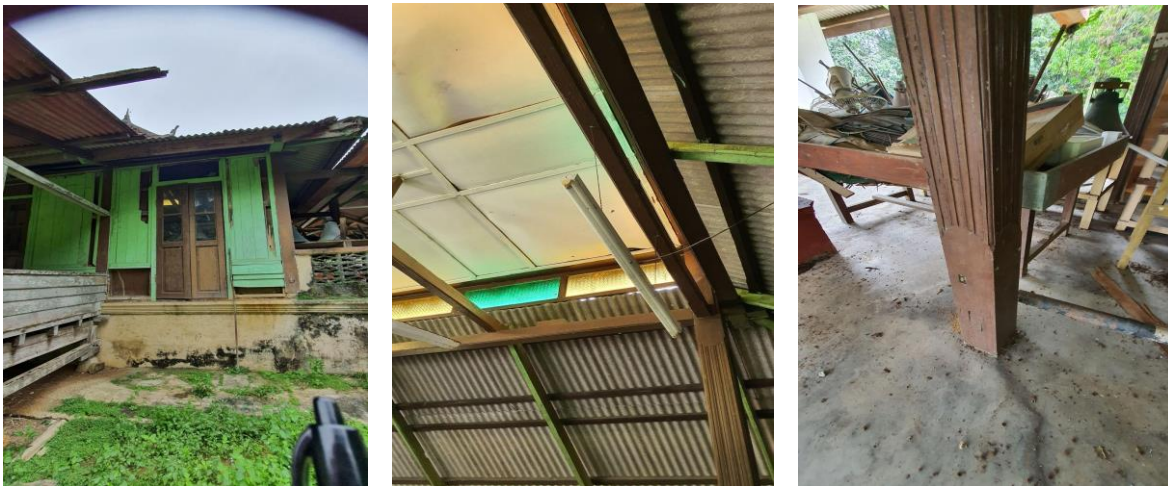


Fig. 7: The original elements of Masjid Jamek Tanah Datar
(Source: Author, 2023)



Fig. 8: The roof crown and two-tier roof design influence by regional style of Masjid Jamek Tanah Datar
(Source: Author, 2023)

4.3 The architectural evolution of heritage masjid in Negeri Sembilan

The heritage masjids have evolved significantly over the past 100 years, with values, morals, and activities growing. The forms and characteristics of buildings will change over time. This building must adapt to these changes, often reflecting long-forgotten decisions. The masjid evolved based on the population growth within its communities.



Fig.9: The exterior extension of Masjid Jamek Tanah Datar
(Source: Author, 2023)

Table 1. The architectural evolution of Masjid Jamek Tanah Datar, Rembau, Negeri Sembilan

Masjid's name	Biult	Design Elements	Evolution
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Masjid Jamek Tanah Datar, Negeri Sembilan	Year 1905-1909	1. Mihrab area 2. 'Perigi'/Wudhu' Area/ 'Kolah' 3. Praying area 4. 'Tiang Seri, staircase, Wooden Flooring, wall, door and window. 5. Minaret 6. Pitch roof and roof crown 7. Tongue and groove design 8. Ornamentation	1. First built in the 18th century, which is between 1905 – 1909. The minimal design of a square shape with an additional small mihrab. 2. All the materials were originally constructed using wood and rumbia. Later, it slowly changes the materials 3. Later in 1973, some wooden structures and components of the masjid were demolished and replaced with concrete structures. 4. The traditional staircase follows the design elements of the traditional houses in the Rembau area. 5. Originally, the masjid had a two-tier pitch roof with a roof crown. The extension has a dome that follows external influences. 6. Currently, the masjid has been totally transformed into a post-modern era design.
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(Source: Author, 2023)

The originality of the building form and layout of the Masjid Jamek Tanah Datar can still be seen today. However, the character changes over time, and the preference of the community towards the modern era and technology of concrete design has developed it into a different language of design. Preserving our cultural heritage allows future generations to understand and appreciate their roots, fosters a more robust cultural identity, allows us to connect with our historical narratives, and provides valuable educational opportunities to create sustainability within cities and communities.



Fig. 10: The interior extension of Masjid Jamek Tanah Datar which involved the praying hall
(Source: Author, 2023)

5.0 Discussion

The holiness of the masjid space is related to how the community is perceived and how individuals behave in public, which influences perceptions, architecture, and society. As a result, the additional spaces in the Masjid Jamek Tanah Datar are intended to meet society's social-cultural needs due to population growth. In the case of the Masjid Jamek Tanah Datar, the praying area is also part of a cultural manifestation, promoting the community's relationship among Muslims in the area. The findings reveal the significance of the social aspect in reinterpreting the heritage masjids in Negeri Sembilan. The research suggests that while constructing a design approach in traditional masjid design, much consideration should be given to the custom authentic desire of the craftsmen.

6.0 Conclusion & Recommendations

Additional findings from this inquiry will be developed into future dialogues. More research is needed to determine the cultural impacts of the planning and construction of Negeri Sembilan's heritage masjids. In terms of the research purpose, this study can be broadened to incorporate research data and graphics, which will be transferred to digital format. The commercialization of public knowledge on areas of society, culture, and customs that have contributed to the uniqueness of Islamic architecture is undoubtedly made feasible by the digitization of drawings in heritage masjid in Negeri Sembilan, Malaysia.

According to research, there is a strong link between social and design influences on construction via traditional design principles that determine the expansion and changes in architectural attribution of masjid design. These architectural design values are a valuable asset in enhancing today's Islamic architectural style. Overall, the evidence encourages future research into Islamic Architecture ideals influencing spatial design, specifically in the heritage masjid in Negeri Sembilan.

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Paper Contribution to Related Field of Study

Many discoveries and understandings of the cultural characteristics of Negeri Sembilan's Islamic architecture have been made by exploring the built environment of the past. Furthermore, this paper adds to the many previous studies on Negeri Sembilan's heritage masjids. As a result, research into these heritage masjids will continue to assist society by providing useful knowledge about the influence of social and cultural factors related to the expansion and evolution of Islamic architecture in heritage masjids in Negeri Sembilan, Malaysia.

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