

INVESTIGATING VISUAL PRIVACY OF HIGH-RISE RESIDENTIAL APARTMENT LAYOUT IN CONTEXT OF ISLAMIC ARCHITECTURE

Hafiy Hatimi Hasnul Hashimi¹
Nur Atiqah Husaini^{2*}
Afiqah Ahmad³
Hanisah Aimi Hamzah⁴

¹Faculty of Built Environment, University Teknologi MARA, Sarawak Campus, Malaysia,
(E-mail: hafiyhatimi2104@gmail.com)

²Faculty of Built Environment, University Teknologi MARA, Sarawak Campus, Malaysia, (
E-mail: atiqahusaini@uitm.edu.my)

³Faculty of Built Environment, University Teknologi MARA, Sarawak Campus, Malaysia,
(E-mail: afiqah627@uitm.edu.my)

⁴Faculty of Built Environment, University Teknologi MARA, Sarawak Campus, Malaysia,
(E-mail: hanisahaimi@uitm.edu.my)

*Corresponding author: atiqahusaini@uitm.edu.my

Article history

Received date : 3-8-2026
Revised date : 4-8-2026
Accepted date : 8-9-2026
Published date : 21-9-2026

To cite this document:

Hasnul Hashimi, H. H., Husaini, N. A., Ahmad, A., & Hamzah, H. A. (2026). Investigating visual privacy of high-rise residential apartment layout in context of Islamic architecture. *Journal of Islamic, Social, Economics and Development (JISED)*, 11 (86), 933 – 947.

Abstract: *A home is one of the basic human needs that protects its occupants from harm of the outside world, provides peace and preserves privacy. In the ethos of Islamic architecture, visual privacy especially is desired in one's home. Visual privacy in a Muslim home is a balance between public space for gatherings and private spaces to allow segregation between genders. This study focuses on the design and layout of Malaysian High-rise Residential Apartments (HRA) in fulfilling the occupant's needs and requirements especially on maintaining visual privacy. The Muslim majority community in Malaysia has of late migrated from Malay Traditional House built on ground to high-rise residential apartments especially in the cities. This increase of high-rise residential apartments is due to rise in population and limited available land leading to demand for mass manufacturing and modernisation. This circumstance has led to a neglect in visual privacy for this modern housing typology with less emphasis on culture and religious requirements especially for Muslim occupants. Through plan-based analysis of different residential apartments design and layout in Malaysia, this study observes physical factors and social factors, two of the main factors in order to achieve visual privacy. The outcome of this study is expected to contribute to future application in different layouts which would optimize visual privacy regardless of cultural and religious background for apartments in Malaysia.*

Keywords: *Visual Privacy, Islamic Architecture, Malay Traditional House, High-rise Residential Apartment, Layout*

Introduction

A residential dwelling provides a basic architectural structure protecting from external disturbances while serving as a secure retreat designed to contribute to human peace and psychological well-being (Ismail et al., 2023). As established by Bachelard (1958/2014) in his book *“Poetic of Space”*, the domestic house is our corner of the world and our primary introduction to the broader universe. Beyond the fundamental role of providing shelter, the spatial meaning and concept of a house are also heavily influenced by culture and religious paradigms. Within Islamic traditions, a house is intended to facilitate daily religious activities apart from being a place to retreat from the public domain. Islamic principles emphasise the role of residential environment in fostering a righteous individual through Islamic teachings and principles. Although the Al-Quran does not explicitly prescribe any architectural layouts, Islamic principles continue to influence the spatial organisation of domestic settings, particularly concerning privacy and social interaction (Mohammad Dini et al., 2023).

Privacy represents a concept that extends beyond a single definition and is widely discussed across various disciplines including law, politics, psychology, information technology and architecture (Hernandez, 2022). Privacy, at its core, is defined as a restrained access to one’s well-being as a means of control. Privacy may be categorised into psychological, physical and social dimensions which establish boundaries between oneself and others (Segelela et al., 2024). These categories aid in explaining how individuals maintain personal space, control interactions and protect emotional and physical well-being in various environments.

Within architectural spaces, privacy is commonly perceived through human sensory experiences such as sight, smell, sound and touch, among which visual privacy exerts a dominant role in regulating human spatial experience. Visual privacy is associated with the sense of sight, and generally is divided into two categories; between occupants and the public outside the building, and among occupants within a building (Hernandez, 2022). The consideration of visual privacy in architecture impacted by cultural and religious values becomes significant as it influences spatial organisation and human interaction. Within an Islamic context, visual privacy is considered a fundamental principle as it recognizes the right of every human being (Mohammad Dini et al., 2023). Furthermore, privacy within Muslim communities creates a delicate equilibrium between individual seclusion and collective engagement, ensuring that visual regulation neither promotes total social isolation nor compromises community integration.

Narrowing focus to the residential built environment in Malaysia, rapid urbanisation rate in Malaysian cities has resulted in High-rise Residential Apartment (HRA) housing as a widely preferred residential typology (Malay Mail, *High-rise or landed? Gen Z is reshaping Malaysia’s housing market; here’s what it means for the future*, 2025). HRA developments are preferred by Malaysian citizens not only due to the affordability, but also because of the urban lifestyle, security, and surrounding amenities they provide. However, the increasing density and close proximity between units within HRA layout have raised concerns in the society as they remain deeply intertwined with localized cultural conventions and religious convictions. This issue becomes particularly significant in relation to visual privacy, where the relationship between occupants, neighbouring units, and the public realm becomes increasingly complex. According to Seo et al. (2021), contemporary apartment layouts in Malaysia often accommodate domestic activities within compact and highly compartmentalised living spaces. Consequently, understanding how traditional socio-cultural privacy mechanisms can be preserved within dense Malaysian multi-family housing provides valuable insights for rapidly

urbanising Muslim majority regions facing similar tensions between modern density and traditional spatial values.

Current research indicates that spatial efficiency initiatives in HRA developments have systematically eliminated traditional horizontal transitional spaces, which historically functioned as visual buffers. The resulting spatial proximity and lack of spatial separation between functional zones significantly diminish visual privacy and impair daily living comfort. Scholarly consensus emphasizes that visual privacy is not necessarily determined by the size of a residential unit, but rather by how the layout is designed (Qaradaxi & Yahya, 2022). However, existing studies on modern HRA in Malaysia predominantly focus on general spatial comfort, density, or overall resident satisfaction, largely overlooking visual privacy within these apartment layouts. Leaving this problem unresolved forces reliance on secondary interior retrofits like heavy window curtains that impede natural daylighting (Aljawder & El-Wakeel, 2022), and perpetuates a fundamental misalignment between modern housing design and the cultural-religious identity of occupants.

This research aims to address these spatial and scholarly limitations through a comparative analytical framework designed to evaluate physical visual privacy strategies within contemporary HRA layouts. The study focuses on three main objectives: first, identifying the physical strategies used in Islamic architecture and Malay traditional house to achieve visual privacy; second, empirically assessing the extent to which current Malaysian HRA unit layouts fulfill visual privacy requirements; and third, determining how core visual privacy principles derived from Islamic heritage and Malay culture can be systematically integrated into modern apartment designs.

Literature Review

The Concept of Visual Privacy in Islamic and Malay Culture

The humans' sense of sight is associated with visual privacy, which is considered one of the most important means of privacy as it is a means of observing the action of others and vice versa (Sherif et. al., 2012). In the Muslim society, the degree of visual privacy required is governed by distinct intensities that correspond to gender expectations, religious decrees, and personal spatial boundaries. A Muslim dwelling operates in three levels of spatial hierarchy which are (1) the macro-level of the city design (2) semi-residential level of the residential neighbourhood design, and (3) the micro-level of the individual home. Based on these three levels, it could be dictated that in a Muslim dwelling, the public level is focused towards the city public spatial space, while the semi-residential is the semi-public space while the private space is focused on the personal homes as highlighted by (Mohammad Dini et al., 2023). This structural division shows the significant attribute of visual privacy in Islamic urbanism.

Across the Muslim society, as researched by Al-Kodmany (1999), it is highlighted that cultural factors are also important within Muslim communities' in regard to the need for privacy. The concept of family reputation or *suma'* represents a critical social consideration, as domestic activities are subject to potential scrutiny from neighboring occupants. Consequently, architectural choices are directly linked to core religious factors including *Sharaf* (honor), *karramah* (dignity) and *haya* (bashfulness) with a particular emphasis on *irdh*, the cultural obligation to ensure the privacy of women within the personal space.

On the other hand, throughout Malay culture, the structure of the society is linked to the beliefs, values and conventions, which are substantially reinforced by Islamic teachings. Corroborating this perspective, Abdul Rahim and Hashim (2018) established privacy requirements are inextricably linked to localized cultural convention and religious conviction. One of the key factors in regulating privacy in Malay society is by the behavioral norms. The Malay communities are guided by the social behavioral etiquette of *budi* (etiquette) *bahasa* (language). The term ‘*budi bahasa*’ refers to a proper behaviour that is displayed in private or public space that involves the rules on clothing and interaction in the community. This cultural framework seeks to balance close familial and community cohesion with the mandatory visual protection of family life and female members from intrusive external observation, thereby establishing an alignment between Malay vernacular culture and Islamic moral principles (Abd. Manaf & Abdul Rahim, 2021).

Therefore, in a Muslim house, visual privacy from external observation should be uniformly maintained especially for women as the Qur’an (the Muslims’ holy book) instructed that the women should conceal their hair and body from strangers. However, women should feel free without head covering from outsiders in the privacy of their own homes (Aljawder & El-Wakeel, 2022). This is further emphasized in the concept of *irdh*, which is a person’s honour and dignity. Within the internal organization of the household, privacy encompasses four distinct spatial dimensions which are (1) privacy relating to the division between neighbour residences, (2) privacy relating to the gender segregation of males and females, (3) privacy encompassing the boundaries within the family unit within the homes and, (4) individual privacy (Mohammad Dini et al., 2023). In traditional Islamic Architecture, the emphasis of visual privacy can be achieved by physically distributing spaces in horizontal floor plans. For example, segregating the male and female areas and having a separate guest and family area (Aljawder & El-Wakeel, 2022).

Housing Layout in Landed and Apartment Housing in Malaysia

Traditionally, vernacular Malay houses can be defined as a timber-framed structure constructed on stilts to keep it undamaged from dampness. The raised position is to allow ventilation from below allowing for air flow under it which would provide a comfortable environment in a hot and humid climate. The under-floor space additionally accommodated utilitarian functions such as storage and livestock breeding. According to Crouch and Johnson (2001) and as illustrated in Figure 1, Lim (1987), the Malay traditional house entrance starts with the *anjung* and *serambi* which serves as a formal reception public space. The interior spatial organization followed an open horizontal sequence regulated by volumetric shifts and floor level changes rather than rigid physical partitions. This sequence established a gradient from public, male-dominated spaces at the front to private, female-dominated spaces at the rear, connected via a transitional passageway known as the *selang*. (Seo et. al., 2021).

In accordance with the findings by Mortada (2003), the design of the layout for Muslim family homes is particularly focused to ensure separation of genders, isolation of females, and the protection of individual privacy. This integration of a transitional semi-public space with the emphasized horizontal serves as a physical factor to achieve the visual privacy while still promoting familial and communal bond (Ahmad Fairuz et al., 2024).

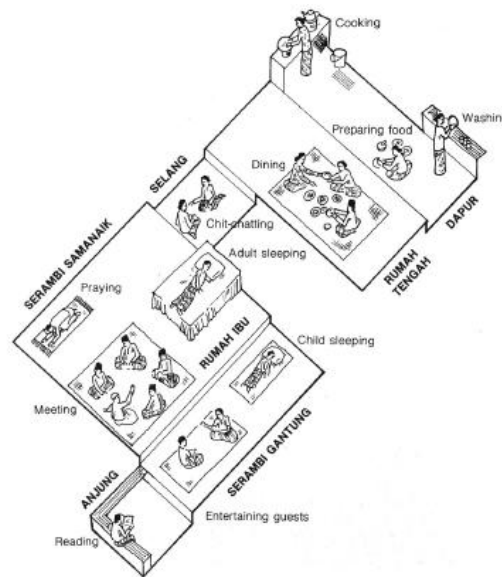


Figure 1: Interior Layout of a Traditional Malay House

Source: Lim (1987)

Throughout the 20th century, with the introduction of new materials and technology such as bricks, reinforced concrete, glass and zinc, modern vernacular houses were built following the housing development in the Western nation such as detached house, semi-detached house and terrace house. The landed modern house adapts to the traditional Malay house with the living room acting as the serambi and variation has been made to maintain visual privacy such as by splitting the space with introducing screens or partition (Seo et al., 2021). Based on investigation by Razali & Talib (2013), although modern material and internal partitions were introduced, the passageway or selang is maintained as a semi-public space. Furthermore, private spaces are still positioned at the back of the house, maintaining the essential visual privacy that is required in the muslim female (Zharani & Selim, 2021).

However, rapid urbanization beginning in the 1960's, low-cost affordable housing was built in Kuala Lumpur, Malaysia to accommodate urbanization. Then in the 1980's, the city experienced a construction boom whereby middle-class apartment housing were introduced. Architects attempted to adapt vernacular spatial molds within highly constrained floor area footprints. Air-wells and pocket spaces were incorporated to allow maximum exposure to the open area for ventilation and cooling. These air-wells are usually positioned at the internal side of the building to be linked to the service spaces which would entail the private spaces of each home while connected to the communal corridor of the apartments (Mohammad Dini et al., 2023) This design feature was used in order to maximise the units at floor area. This would define the physical factor of the privacy in the internal space design of the unit as the internal design space in each unit needs to accommodate the layout of each floor area of the apartment.

In the research by Seo et. al. (2021), spatial syntax analyses reveal that modern apartment units designed for maximum spatial efficiency exhibit a complete loss of the traditional horizontal spatial sequence and the systematic elimination of the passageway or selang This design loss compromises visual privacy, forcing the spatial repositioning of public and private zones and necessitating the introduction of retrofitted physical walls and partitions. Understanding the approach of both Islamic architecture of home and a Malay home, whether traditional or modern, the desire to maintain visual privacy are mostly executed through the design of a

horizontal floor plan, which in this study of comparing with a HRA whereby the constrained space planning limits the ability of architects to design with such luxury of space (Seo et. al., 2021).

Therefore, this research would further study the aspects of both physical and social factors in order to achieve the visual privacy in a HRA unit. This study would focus on the social factor as privacy is a fundamental principle in the context of Muslim community and the physical factor in the mechanism of the placement of wall or partition as well as door orientation due to the removal of the Malay traditional home spaces such as selang to achieve the visual privacy.

Methodology

This study focuses on a qualitative approach based on observation and synthesis of case studies to collect the data. The careful case study selection was made to ensure the HRA units are within an urban environment of mixed ethnic background and religion but demographically is known to have more than 50% Malay and predominantly Muslim demographic. Therefore, the state of Selangor is chosen with over 60% of Muslim population according to the Population and Housing Census of Malaysia (2020). Specifically the capital city of Selangor, Shah Alam located in the Petaling district was chosen due to its rapid urban growth being on the fringe of the capital city of Malaysia, Kuala Lumpur. The Department of Statistics Malaysia states that, Muslims make up a majority of 53.4% in Petaling district and especially living in Shah Alam.

Specific focus was directed to Section 13 in Shah Alam, an urban zone experiencing continuous commercial and HRA development stimulated by the Light Rail Transit (LRT) infrastructure that connects Shah Alam to Kuala Lumpur. The three (3) HRA buildings were chosen for the availability of architectural data such as architectural drawings and visual documentations for synthesis of visual privacy attempts. These factors of urbanisation contribute to the reason for choosing Section 13, Shah Alam as a small sample of Malay and Muslim demographic in Malaysia. s

The researcher has also adapted literature review to provide an insight into visual privacy applications through two (2) phases which are the physical factors and the social factors, in each of the chosen apartment units. The layout of the three (3) apartment units are first modeled in 3D via Sketchup based on available floor plan images found online. The model highlights wall, partition, doors, transitional spaces, and zoning of each unit. The HRA floor plans are then analysed based on the factors in each of the phases to examine the attempts at architectural elements. Physical factors that need to be observed are the physical architectural elements listed in the Table 1 and later the same architectural elements analysed through the lens of social factors on whether the apartment layouts are sympathetic to gender segregation, religious and societal norms. Table 1 below illustrates the factors observed:

Table 1: Framework of Observation and Analysis Based on Physical and Social Factors

Phase	Observation	Analysis
1. Physical factors	Architectural Elements: Walls and partitions Door Orientation Layout: Transitions Zoning	Determining the physical factors that protect or expose residents' privacy Evaluating the layout to assess if private areas are secluded from the main entrance and communal zones.
2. Social factors	Sociocultural Expectations: Religious Norms Societal Norms Gender Segregation	Assessing the social factors to determine if the physical factors support traditional cultural and religious values.
3. Results	Privacy level through marking system	The author analyses the apartment layout efficiently securing users' privacy therefore adhering to the cultural and religious norms.

Source: Author

The result of the analysis will bring towards a marking system adapted and restructured based on the system by Al Husban et. al. 2021. Visual privacy levels are quantitatively evaluated on a three-point scale (0 = low privacy, 1 = medium privacy, 2 = high privacy), where higher cumulative scores denote superior architectural visual privacy fulfillment within the apartment layout.

Results and Discussion

This research examines the layout of three (3) High-rise Residential Apartments (HRA) focusing on the operational extent to which contemporary multi-family floor plans fulfill domestic visual regulation. The first HRA, is Emira Residence, a 27 storey HRA with 400 apartment units. The HRA features modern living amenities and open-concept architecture, with a combination of two or three bedrooms. The specific floor plan selected for analysis is the two-bedroom layout, which encompasses one en-suite bathroom, a secondary bathroom situated adjacent to the second bedroom, a dry kitchen, and an adjoining laundry area.



Figure 2: Study of Emira Residence Floor Plan Layout

Source: Author

Table 2: Observation and Analysis of Physical Factors for Case Study Emira Residence

Phase	Architectural Elements	Observation	Analysis	Level of Privacy
Physical factors	Walls and Partitions	No wall or partitions from entrance to public spaces (living and dining room)	Lack of physical interior barrier for seclusion	0
		Entryway protected by exterior wall “A”	Visual buffer from outside housing unit	2
	Door Orientation	One bedroom door faces public space One bathroom door adjacent to public space	The occupants of bedroom and bathroom may be prone to exposure	1
Social factors	Transitions	Entryway acts as transition before direct view to public spaces	Transition area act as a "shift" to reduce direct view	2
	1) Entrance			
	2)Between public and private area	Transition to private spaces (bedrooms) are minimal in size	Exposes private spaces to direct view from public spaces	1
	Zoning	The zoning between public and private spaces are clear	Private areas are separated by walls and doors	2
		Lacks buffer between zoning of public and semi public space	May cause more interaction between the public and semi public space	0
Total Score				8

Source: Author

An analysis of the physical and social factors within Emira Residence yields a total visual privacy score of 8, establishing it as the highest performing layout among the evaluated case studies. The figure and table above shows observation for Emira Residence where the architectural element of the extended exterior wall “A” provides a viewing buffer from the exterior of the unit. Conversely, the internal spatial arrangement lacks physical interior walls or partitions between the entrance and communal spaces, thereby creating a weak visual buffer unless room doors remain completely closed. As shown in Figure 2, the first transition area, the entryway, is protected visually, and the second transition area between the public and the private spaces has attempts at visual buffering but the orientation of the bedroom and toilet doors which faces the public space and is perpendicular to the public space respectively may result in exposing occupants visually to guests in the public space.

Observation under the social factor of gender segregation, the absence of a dedicated spatial partition between public and semi-public domains compromises the visual seclusion of female occupants within the kitchen space. Referring to traditional malay houses, the gender segregated spaces including entrances and social spaces allow for ease in interaction and visual protection of female occupants of the home (Ahmad Fairuz et al., 2024). The public space has no clear zoning for male and female segregation which does not support both religious and societal norms. These unsegregated shared spaces heighten the likelihood of unbuffered

interaction between female residents and visitors. Consequently, while private bedroom spaces remain physically enclosed, their spatial seclusion feels compromised due to the open-plan living and dining configuration.

The second evaluated HRA is Dian Residency comprising two (2) towers, Tower A with 26 storeys and Tower B with 25 storeys which brought the total number of apartment units to 832 units. The apartments are available in two or three bedroom configurations, with sizes ranging from 550 to 810 square feet. Dian Residency is located in a densely populated location and surrounded by institutional and commercial zones. The chosen layout is the 3 bedrooms configuration, featuring an en-suite bathroom attached to the master bedroom and another bathroom for public usage. There is a dry and wet kitchen adjacent to the entrance with an open plan concept for living, dining and dry kitchen as illustrated in the Figure 3.



Figure 3: Study of Dian Residency Floor Plan Layout

Source: Author

Table 3: Observation and Analysis of Physical Factors for Case Study Dian Residency

Phase	Architectural Elements	Observation	Analysis	Level of Privacy
Physical factors	Walls and Partitions	No wall or partitions from entrance to public spaces (living and dining room)	Lack of physical barrier for seclusion	0
		No buffer of entryway from exterior of unit	Clear view from exterior unit from the front door may expose occupants	0
	Door Orientation	All doors faces public space	The occupants may be prone to exposure	1
Social factors	Transitions 1) Entrance	Before the entrance there is very minimal transition with direct view to public spaces	The transition area may not be efficient to block view	1

2)Between public and private area	No transition from public space to private space	Direct view of bedroom doors from public space cause immediate view from guests to occupants	0
Zoning	The zoning between public and private spaces are clear	Private spaces are separated by walls and doors	2
	There are no semi public spaces	Lacks semi public spaces that may cause interaction and direct view from public spaces to private spaces	0
Total Score			4

Source: Author

An evaluation of Dian Residency yields a total visual privacy score of 4, representing the lowest evaluation among the analyzed developments. As detailed in Figure 3, the layout incorporates no internal buffering walls or entryway partitions, thereby permitting an unobstructed exterior line of sight from the main entrance door directly into the living and dining spaces. The doors to the private spaces, the bedrooms, bathrooms and wet kitchen, are all oriented facing the public space which increases immediate view if the doors are not closed at all times. This spatial arrangement drastically increases immediate visual exposure whenever doors are not closed continuously, thereby diminishing spatial hierarchy and generating uncomfortable living conditions for female occupants during guest visits.

There are also very minimal transition areas to buffer view in the apartment unit as well as into the interior of the housing unit from the exterior. The lack of semi-public zoning whereby all spaces are classified as public is due to overlapping of public spaces in the open plan concept. This may increase mixed interaction between male and female occupants which does not support the gender segregation, religious and societal norms within Malay muslim communities (Mohammad Dini et al., 2023).

The third evaluated HRA is Bayu Residence @ Mori Park consisting of one 37-storey tower which brought the total number of apartment units to 841 units. The apartments are available in one to four bedroom configurations, featuring dual key units and terrace level layouts. The development is poised to become a catalyst for sustainable, community driven urban growth featuring a landmark Transit Oriented Development (TOD) that promotes sustainable urban living and enhances community connectivity. The selected floor plan is a three-bedroom configuration comprising an en-suite master bathroom, a shared public bathroom, and an integrated open-plan living, dining, and dry kitchen area.

Spaces: 1) Entrance 2) Living room 3) Dining area 4) Kitchen 5) Bedrooms 6) Bathrooms

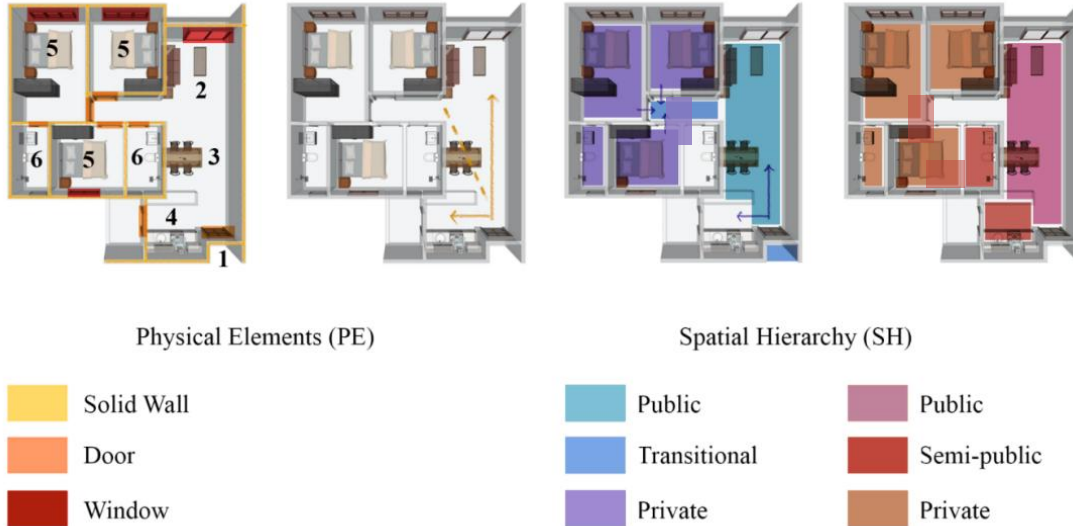


Figure 4: Study of Bayu Residence @ Mori Park Floor Plan Layout

Source: Author

Table 4: Observation and Analysis of Physical Factors for Case Study Bayu Residence @ Mori Park

Phase	Architectural Elements	Observation	Analysis	Level of Privacy
Physical factors	Walls and Partitions	No wall or partitions from entrance to public spaces (living and dining room) No buffer of entryway from exterior of unit	Lack of physical barrier for seclusion Clear view from exterior unit from the front door may expose occupants	0
	Door Orientation	All bedroom doors faces the a long transitional space One bathroom door adjacent to public space faces the transitional space	The occupants are less prone to exposure The occupants of the bathroom may be prone to exposure	2 1
	Transitions	Before the entrance there is very minimal transition with direct view to public spaces	The small transition area may not be efficient to block view into public spaces	0
Social factors	1) Entrance 2)Between public and private area	Ample transition from public space to private spaces	The transitional space reduces direct visual exposure from the	2

		public space to the bedroom doors
Zoning	The zoning between public and semi public with private spaces are clear Lacks buffer between zoning of public and semi public space	Private spaces are 2 separated by walls and doors May cause more 0 interaction between the public and semi public space
		Total Score 7

Source: Author

The empirical evaluation of Bayu Residence @ Mori Park results in a total visual privacy score of 7, positioning it as the second highest scoring layout. The figure and table above shows observation for Bayu Residence @ Mori Park whereby the physical factor that functions well as a visual buffer is the transitional space or “corridor” that separates the public space and the private spaces. However, the entryway threshold features minimal transition, allowing individuals outside the unit to obtain a direct view into public living areas. Similarly to both Emira Residence and Dian Residence, the public space, living room and dining room, has no clear segregation for male and female spaces and the clear view into the semi public space exposes female occupants while they are in the kitchen.

Table 2 to Table 4 shows the observation and analysis of each phase as well as the marking for privacy indicators for each of the HRA units clarified in the research methodology. The empirical evaluations across all phase indicators and case studies are summarized in Table 5.

Table 5: Summation of Marking for Privacy Indicator

HRA	Mark
Emira Residence	8
Dian Residency	4
Bayu Residence @ Mori Park	7

Source: Author

Based on Table 5, the cumulative privacy scores reveal distinct variations in visual regulation across contemporary HRA floor plans. The marking system shows the HRA unit with the highest mark for visual privacy is the Emira Residence. This is due to the placement of the wall (“A”) before the entryway paired with an initial entrance transition space. The second highest marking is Bayu Residence @ Mori Park and this is due to the long transition space that can be classified as a corridor to reach the private spaces. The corridor design reduces direct visual connectivity from public spaces towards the doors of the bedrooms and bathroom. Conversely, Dian Residency received the lowest score (4) due to a complete absence of buffering walls, unbuffered entryway sightlines, and an inadequate transitional sequence between public, semi-public, and private domains.

Conclusively, all of the case studies have overlapping public spaces with no segregated space for different gender which indicates that the religious and societal norms are disregarded in designing these HRA layouts. Furthermore, these modern apartment floor plans fail to maintain

the spatial evolution established in vernacular landed housing having a *serambi* in the form of the living room and the *selang* in the form of kitchen at the rear of the building (Seo et. al., 2021) organized along a horizontal spatial plan (Aljawder & El-Wakeel, 2022). This study reinforces the understanding that designing within severe spatial constraints has caused the systematic elimination of these traditional spatial buffers (Mohammad Dini et al., 2023) that adhere to religious and societal norms. The extent of design for these HRA units are as mentioned by Seo et. al. (2021), through usage of wall and partition to separate space zoning and transitional space that acts as a short corridor similar to the function of *selang*. However, this *selang* in a HRA is usually designed at the entryway or as an intermediary space before the private areas.

Ultimately, this research demonstrates that the integration of Islamic privacy principles and Malay socio-cultural norms remains deficient across contemporary Malaysian apartment developments, even within majority-Muslim urban environments. Based on these empirical outcomes of the small sample of case studies, visual privacy can be systematically adapted in future HRA unit designs through two primary architectural interventions:

1. Incorporating solid walls, partitions, or turning walls at the unit entryway to obstruct exterior sightlines originating from communal corridors; and
2. Integrating dedicated transitional spaces or internal corridors that block direct sightlines into private quarters, thereby replicating the protective spatial function of the vernacular *selang*.

Conclusion

The investigation into the spatial organization of contemporary High-rise Residential Apartment (HRA) layouts in Shah Alam, Selangor demonstrates that the fulfillment of visual privacy varies significantly across floor plan configurations. Through the application of a three-point evaluation scale (0 = low privacy, 1 = medium privacy, 2 = high privacy) assessing physical and social indicators across three residential developments, quantitative comparison in spatial performance were established. The visual privacy scores ranging from Emira Residence with 8, Bayu Residence @ Mori Park with 7 and Dian Residency received the lowest evaluation of 4 stems from the absence of entryway partitions, creating direct exterior lines of sight into central living spaces, combined with bedroom doors opening directly into public domains. Based on the comparative metrics, it is possible to conclude that visual privacy regulation within HRA is not directly dictated by the size of the unit, but rather by the strategic planning of the floor plan and the physical placement of visual barriers. However, this study relies on reviewing existing literature and comparing HRA layouts from a small sample in Malaysia which may not fully capture the experiences of privacy in an apartment unit.

From a social perspective, the study reveals a misalignment between modern open plan spatial planning and the privacy expectations of Muslim and Malay residents. Across the analysed case studies, the overlap of public and semi-public living areas without gender-segregated zoning results in female occupants visually exposed within kitchen spaces during guest visits. As a result of this spatial compression, public and private domains overlap indiscriminately, compelling occupants to rely on secondary interior modifications, such as heavy window curtains, which may impair natural daylighting and compromise overall living quality.

Consequently, the findings of this research demonstrate that visual privacy can be successfully established within compact, HRA layouts without requiring an increase in unit footprint. The evidence indicates that visual privacy can be achieved through two primary architectural

interventions: first, the incorporation of solid turning walls, partitions, or exterior buffer walls at the entryway threshold to obstruct sightlines from public corridors into central living spaces; and second, the integration of dedicated internal transitional corridors that obstruct direct views into private bedrooms and bathrooms, thereby replicating the protective spatial function of the vernacular selang. These design strategies offer practical guidelines for architects, urban planners, and housing policymakers, enabling the incorporation of culturally and religiously responsive visual privacy standards directly into HRA design frameworks, thereby ensuring that rapid urbanization does not compromise essential socio-cultural values. The recommended future research may further find practical ways to use traditional privacy features in HRA units to ensure privacy in a modernised environment. Future studies could potentially collect real-world data for solid evidence to ensure privacy is a required part of designing HRA layouts.

Acknowledgements

We would like to acknowledge the Faculty of Built Environment of University Teknologi MARA Cawangan Sarawak providing the necessary facilities to provide a conducive environment to complete this research.

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