TAMAN BUKA

A Thesis on retrofitting a Malaysian suburb

P5 Thesis Report

Daphanie Oon

TU Delft Faculty of Architecture

603446

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Introduction

This graduation thesis is focused on rapid urban growth faced by the town of Taman Melawati, Malaysia. The result of which is leading to the phenomena of fragmentation negatively impacting the urban environment such as congestion, sprawl, functional and demographic segregation. These issues are becoming increasingly prevalent in many developing metropolitan cities around the world experiencing rapid urbanization, as the cities' urban structures do not grow cohesively together with the population and demands of the people. The end goal of this thesis is to be able to propose a retrofitting of the existing urban structure to create a better connection for the existing residents and to reintegrate the structure of the town to become more cohesive.

Sungai Siput Boy (2011)

Problem Statement

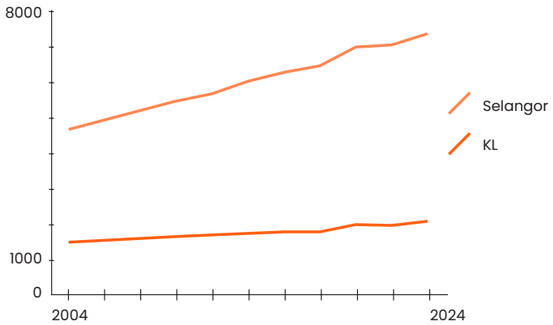
A lack of a cohesive urban structure burdened by rapid urban growth has led to the phenomena of fragmentation in cities.

The various metropolitan cities of Southeast Asia are often characterised as much by the similarity in climate and culture as by the issues they share. Images of a bumper-to-bumper traffic jam on a concrete flyover is as ubiquitous to the Indonesian urban landscape as it is in Manila or Malaysia. These cities are parallels of each other, in the arena of globalisation, Southeast Asia attracts the bulk of foreign direct investment which are encouraged by national governments in the hopes of making the city more competitive. As a result, governments strive to push for the economic growth of the city by way of mega projects, mixed development, office complexes and megamalls. All this results in these cities undergoing rapid urbanisation, meanwhile,

traffic jams and seasonal floods continue to plague the inhabitants, old and new alike.
In Malaysia, rapid urbanisation has led to an influx of people into the city. 79% of the total population of Malaysia lives in an urban area as of 2023. Kuala Lumpur is the capital, it is a federal territory, which means that it comes under the jurisdiction of the federal government instead of a local municipal authority. According to the Department of Statistics, by 2020 Kuala Lumpur has been 100% urbanised and boasts the highest density of people in the country.(DOSM) However, the Kuala Lumpur federal territory is located within the state of Selangor. This relationship is relevant because while the growth of the Kuala Lumpur Federal Territory has not been as obvious, Selangor has been steadily growing throughout the years. Selangor's proximity to Kuala Lumpur becomes a main selling point for people looking for work and to settle down. When plotting the physical growth of Selangor over the course of 40 years, the total built up area has expanded by 200%. However, in terms of density Selangor ranks as 2nd highest amongst all the states. When the population of Selangor grows, does the city's urban structure necessarily grow cohesively together in order to accommodate the demands of this new increase?

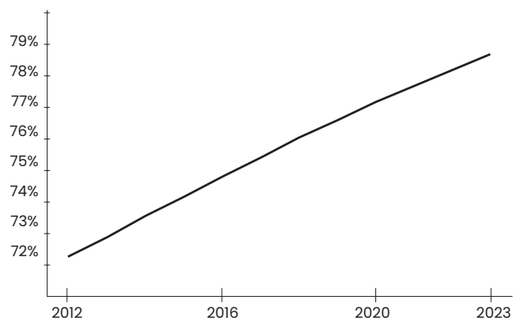
In order to investigate this phenomenon, this thesis looks at the MPAJ municipal district, specifically on the town of Taman Melawati. This town is located on the edge of the shifting boundaries of Selangor. Formerly a rubber plantation owned by a British company during the colonial era, the first suburban neighbourhoods were developed during the 1980s alongside a commercial centre. The town continued to grow steadily, however from the year 2004 to 2024, vast square kilometres of the surrounding forests have been cleared to make way for new gated developments in the town, bringing in an influx of new residents which KC Ho calls a growing demographic of an urban professional class who are seeking to establish an identity for themselves. On the surface, Taman Melawati has a dichotomous image. Next to reports of its attractiveness to developers for its tranquillity, access to nature and proximity to Kuala Lumpur, are reports of landslide occurrences and protests against increasingly high-density developments that are being approved for construction. The natural borders of the town are being eroded by urban sprawl to account for these new developments, threatening the water retention qualities of the area. Overreliance on private vehicles create another subset of issues, such as illegal parking occurring along major roads and congestion becoming a regular occurrence daily. These phenomena are categorised in the thesis as "fragmentations", and they seem to be caused by the misalignment of growth and urban structure. As the town expands, new needs push against the preexisting structure and create these fragmentations that make urban life inefficient and burdensome. The fragmentations are figurative as well as literal, things like heavy traffic, road clutter and gated communities create a physical barrier between one part of the town to another, closing it off. Despite its relative size and lower density,

Population Growth in Selangor and KL from 2004 to 2024

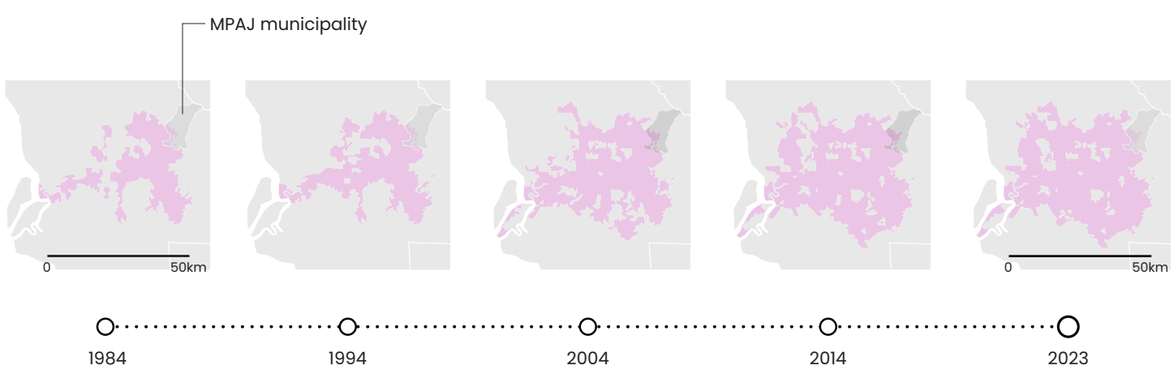


Government of Malaysia (2025)

Percentage of total population living in urban areas



World Bank Data (2023)



Author's own (2025)

fragmentation has already begun to manifest in this suburban town.

Despite the smaller suburban identity of Taman Melawati, it faces big problems that are not unheard of in the current discussions of urbanisation today. The fragmentations mentioned here are not uncommon when discussing major South East Asian cities such as Bangkok or Jakarta. However, Malaysia is still often left out of the discussion. Furthermore, discussions of issues relating to this thesis' idea of fragmentation tends to focus more on fully urbanised cities and less on suburban towns. Therefore, this research will focus on the factors that have led to the current state of fragmentation as seen in this particular Malaysian suburb.

Reserach Aim

The problem statement puts forth the issue of fragmentation that towns and cities alike now have to deal with. **This thesis aims to suggest a design intervention that can play a part in restoring cohesion to the fragmented town through utilising the existing structure of Taman Melawati**. In order to do this, the research will firstly focus on analysing the current state of the town in order to understand the affects of fragmentation in this specific context. This involves studying the town's physical and morphological structure and analysing its relationship to the manifestations of fragmentation that occur throughout the town's urban fabric. Part of this study will also involve comparing changes in the urban fabric from the past, to understand the disrepancies caused by rapid urban growth.

The study will have a focus on the edges and boundaries of different communities and how they interface with each other. As edges are often where territorial lines are drawn or blurred they might provide a micro perspective on the wider disconnectedness faced by the town. Researching the exsiting boundaries might also provide insight into areas of potentiality that could be retrofitted to introduce more cohesion into the urban structure of Taman Melawati.

Another factor to account for is the way that residents currently use the public spaces around Taman Melawati. The culture of public life and informal boundaries set up by local residents can provide insight on what key design elements can be catalogued to fulfil the aim of retrofitting the existing urban structure for a more cohesive and integrated experience.
All in all, the research aims to understand the context specific complexities faced by the town and use that knowledge in order to propose a design intervention that could retrofit it in its current state for a more

How can a **design intervention** utilise the existing structure of Taman Melawati to **restore cohesion** to a fragmented urban structure?

What are the **kinds of physical and spatial fragmentations** that have manifested in Taman Melawati over the years from the type of urban growth that is being implemented?

What are the **kinds of borders and edge conditions** that have been formed by the on-going fragmentation of Taman Melawati and can they be retrofitted to serve as a means for reconnection?

Where do the **residents of Taman Melawati create space** for themselves within the town that are not necessarily enforced by formal boundaries?

How can segregated territories be interfaced better to create a more **cohesive culture** of public life and land use in the urban structure of TM?

Theoretical Framework

Though each theorist frames their approach from a different perspective, the themes of categorisation, boundaries, control and ownership tend to overlap and cast a broader perspective on how these issues can be approached during the research questions.

City Modelling

Graham Shane, in Recombinant Urbanism, approaches the city's structure by categorising it into heterotopic nodes and networks which he sees as a layered structure. The city, according to Shane is made up of enclaves and armatures. The enclave is characterised by a central, compressed space demarcated by a boundary or entrance.(pg 193) Shane argues that enclaves act as centering devices for flow systems, each performing various required functions for the city. Armatures are a linear sorting device that defines a space of flow that facilitates exchange for urban actors on foot. (pg 198) Finally, he posits a heterotopic model that brings in a complex, dynamic imbalance into the urban fabric, a space that is almost a sub-city. (pg232) These city models provide a framework for approaching the research analysis so that similar patterns in Taman Melawati's urban structure can also be documented. Analysing along the lines of this theory shows the correlations of certain prevalent urban typologies that could lead to fragmentation happening. The organising principles of the town and the importance of certain spaces to the daily functioning of the town are also made clear.

Building and Dwelling

What both Sennet and Shane acknowledge is that a lively, functional city requires contradictions. They both credit Jane Jacobs when it comes to this, arguing that the city needs heterogeneity, diversity and complexity.

Sennet argues that the modern city is a 'closed' one, he decries the functionally segregated city, arguing that 'tight fit' planning and privatisation kills the variations that urban spaces need to stay alive. (pg ?) While Shane highlights the heterotopia as a locus for this complexity, Sennet hones in on the edge. In Building and Dwelling, he brings up the significance of boundaries and the part they play in shaping the city and its users. Sennet claims that the modern city is made up of closed boundaries, functionally isolating different zone functions. The boundary is a potential pathway for exchange, where one community meets and touches the other. In order to provide this, porosity is required at the edge. The quality of porosity is not inherently opposed to permanence, instead Sennet offers a perspective where even walled structures can be made porous through social means. Porosity of edge is a quality that is "unfixed", and can adapt to what it required from it.

Landscape Ecology Principles

This idea of cross border exchange is supported by Dramstad, Olson and Forman in Landscape Ecology Principles. Edge conditions differ from the interior of the site, often supporting different types of life forms and life cycles. The condition of the edge is its own ecosystem, it influences the flow of resources or species along or across it, and (pg 27) depending on their shape they can act as either a filter or hard boundary for the enclosed. The edge and boundary approach analyses how boundaries can create a closed city. It also provides a perspective on how connections can be created by amending boundaries or introducing a more porous edge in order to facilitate exchange.

Border Ecologies

Border Ecologies serves as an answer to the questions brought up by Shane and Sennet on territories and their boundary conditions. In it, Bolchover and Hasdell evaluate the Hong Kong – Shenzhen border, evaluating its complexity through the methodology of recognising Resourcing/ Dynamics. The approach categorises human and environmental systems of a location to determine contributing factors of the place dynamics. This includes evaluating cross-border flows and the developmental patterns of the site. They point out how enclave conditions create 'micro borders' within the urban fabric. In the modern city, enclave creation has become the dominant force in contemporary urban development. It creates physical fragmentations of the city, segregating economic classes and creating controlled spaces with singular functions. An open city, according to them, has a system of interconnected ecologies that work on cooperation rather than autonomy.

The Agency of Mapping

The research will be conducted mainly through the practice of layered mapping. Mapping can give the researcher insight into the complexity of the nature of the site that is being mapped. When the data is layered it is not united by a single organising principle but the complexity of the site is revealed.1 Each map depicts information about parts, but the amalgamation of the layers form a visual of the relationships of said parts which can then be studied. Mapping is also an exercise in organising and reorganising information as it contains various stages such as collecting, curating, plotting and analysing. Concious choices and judgements are made at each stage that brings an awareness to intent when it comes to the construction of the map.2 Mapping can be done for physical and non

physical relationships, which compliments the city model theory through expanding the documented knowledge from the existing site. These theories are relevant to the discussion of the fragmentation, as the research can explore the relationship between the formation of these city models and the fragmentations that arise from it. It also reveals the types of edges and boundaries that exist amongst the city, with of them even being formed by the fragmentations themselves.

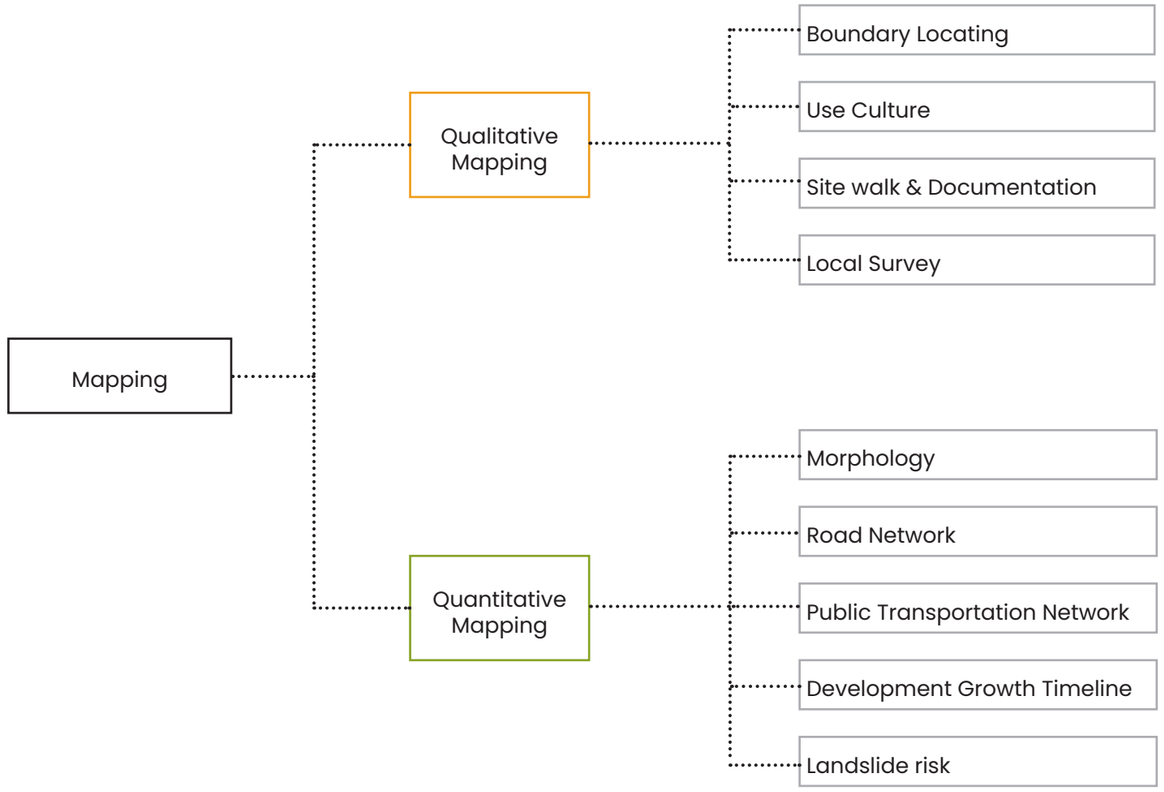
Methodology

The main methodological framework for research will be focused on the practice of Mapping. In order to propose a design intervention to restore the cohesion, the aim is to first understand the context specific complexities of the town. The relevant information being the physical and non-physical elements of the town and their relationships which bring about fragmentation. This approach draws from Border Ecologies' Resourcing/Dynamics that assess the contributing factors to the dynamics of the town. The result of documenting the existing systems, and top-down processes enacted on the town can give a bigger picture on the feedback of each of these elements on the other.

The Mapping will be done both Quantitatively and Qualitatively. Quantitative Mapping focuses on the objective physical features of the town. It documents the current existing network of roads and transportation lines as well as physical structures and boundaries. With Shane's city model theory in mind, the aim is to thematically map out the types of enclaves and communities existing within the town, and the trend of their growth over a period of time. Included in this are human systems, like planning policy's designation of plot ratio for zone density. Other relevant quantitative data are the manifestations of fragmentation such as the concentration of congestion and existing risk zones for ecological disaster. As Malaysia does not have an open data policy,3 many maps and demographic data will have to be pieced together through various sources and available data, putting the researcher in direct participation in sourcing and creating the datasets as well as the mapping process. This may mean sourcing from different stakeholders such as OpenStreetMaps, websites of developers or local third-party interest groups.

Quantitative data aims to capture the subjective, experiential perspective of the town. The likes of which could reveal some unexpected risks or potentials that are not made explicit in objective data. Part of the data collection will include site walks along edges and boundaries. Walking as a practice, championed by Micheal Certeau and the Situationists, grounds the researcher in an everyday practice, familiarising the practitioner with the urban environment within a transitory time frame.4 Petrescu notes that it offers a different way of reading and interpreting the city, as the practitioner perceives the city from a roaming point of view.5 More importantly, it offers a human scale perspective on the urban environment. By walking the researcher experiences for themselves the territories that are or are not meant for human roaming. Another technique of data collection is to conduct surveys and interviews with interested participants. Having input from private individuals will illustrate a mental map of the town, adding another layer of data onto the mapping exercise. Varied perspectives of residents can further illustrate the identity of Taman Melawati within the research and point to the desires and hopes for the future of the growing town.

Combining the qualitative and quantitative data will give a perspective of what is deemed as 'ground-truth' about the current conditions of the town.



Research Results

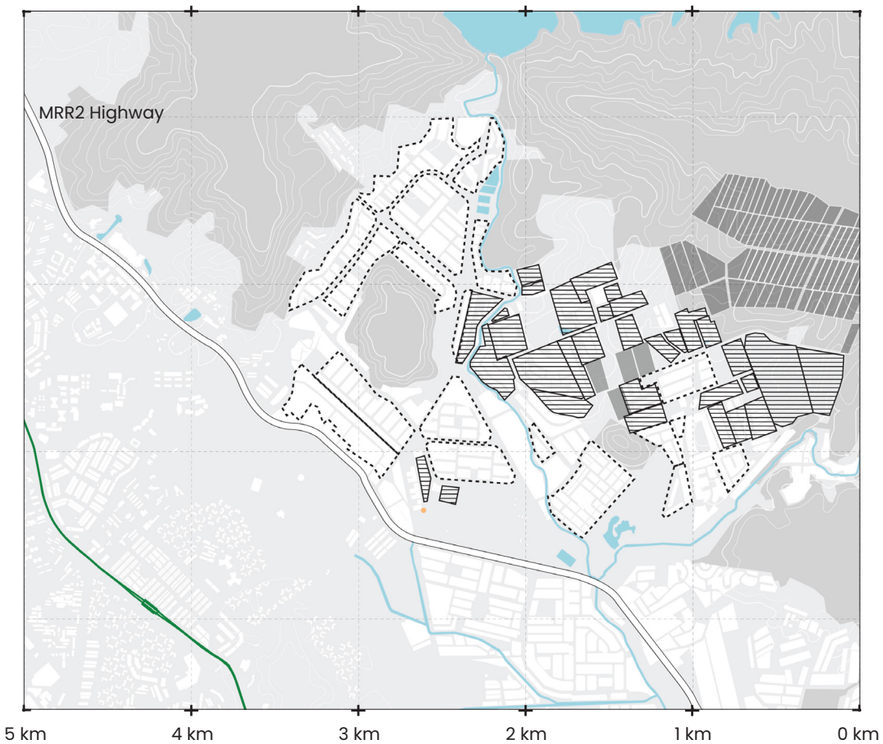
The final results of the Mapping is divided into 5 themes:

1. Sprawl
2. Development Density
3. Ecological Risk
4. Transport Infrastructure
5. Public life

Each theme contains quantitative data, and the results are supported by further qualitative data in order to draw a conclusion from the findings. These themes also correlate to what residents selected in a survey as their most pressing concern about Taman Melawati.

Sprawl

From the map you can see there has been an influx of new developments since the early 2000s which, in contrast to the older housing have mostly been gated guarded developments. They occur on the hillside with each development deeper into the forested land. There are still more plots of land available for purchase according to government websites, indicating that the edge of the forest is still at risk and the sprawl can continue to spread towards the east, encorashing on existing forested areas.



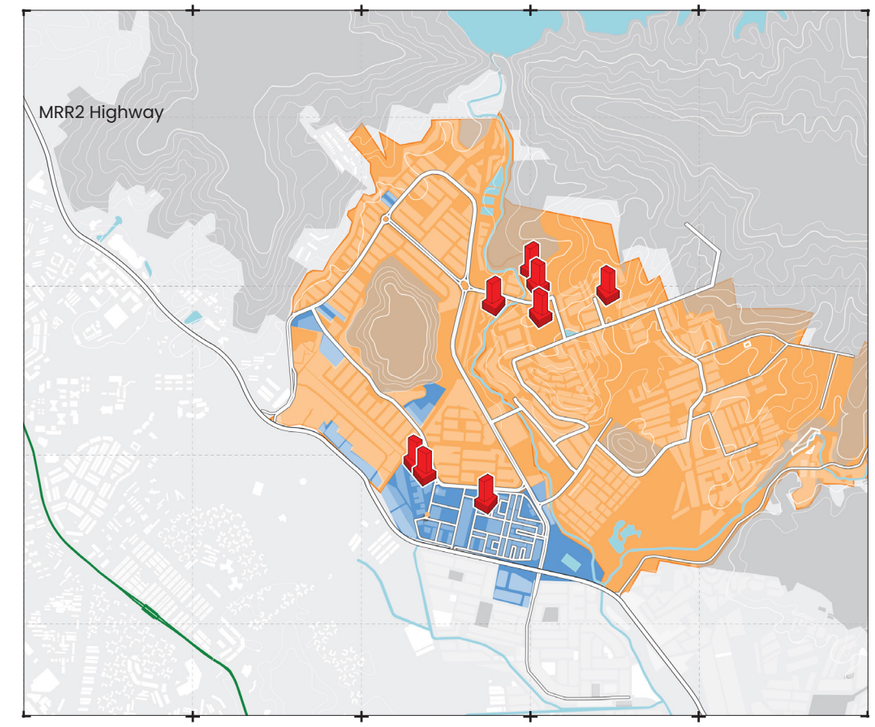
19 trees (2023)

Development Density

A majority of the residents in the survey selected “unregulated development” as their main cause for concern. In this context, it appears to mean that there has been a lack of oversight when it comes to the approval of new high density gated high rises in the area. The highlighted orange and blue areas on the map correspond to pages that state the density limit from the approved planning document put out by the local municipal authority in 2011. All future developments from 2011 to 2020 are supposed to follow the guidelines set by this document. However, none of these high-rises adhere to the 1:4 plot ratio or the <60 units per hectare guidelines agreed upon in the public document. This indicates a lack of transparency from the local gov when it comes to approving these development projects. This is seen to have consequences when relating it to the area’s risk of landslides.

The Edge Malaysia (2022)

Tuju Setia



Residential (plot ratio 1:4)

Commercial (plot ratio

High rise developments

GUNA TANAH UTAMA	DENSITI /NISBAH PLOT MAKSIMUM
Kediaman	Rumah sedia ada Pengekalan kawasan dan densiti sedia ada Cadangan kediaman Densiti rendah ≤ 8 unit/ekar Densiti Sederhana ≤ 25 unit/ekar Densiti tinggi ≤ 60 unit/ekar Nisbah Plot 1 : 4

MPAJ RT 2020 (2011)

GUNA TANAH UTAMA	DENSITI /NISBAH PLOT MAKSIMUM
Perniagaan dan Perkhidmatan	• Nisbah Plot 1 : 4 • Kawasan berhampiran dengan stesen pengangkutan awam dibenarkan nisbah plot 1:5

MPAJ RT 2020 (2011)

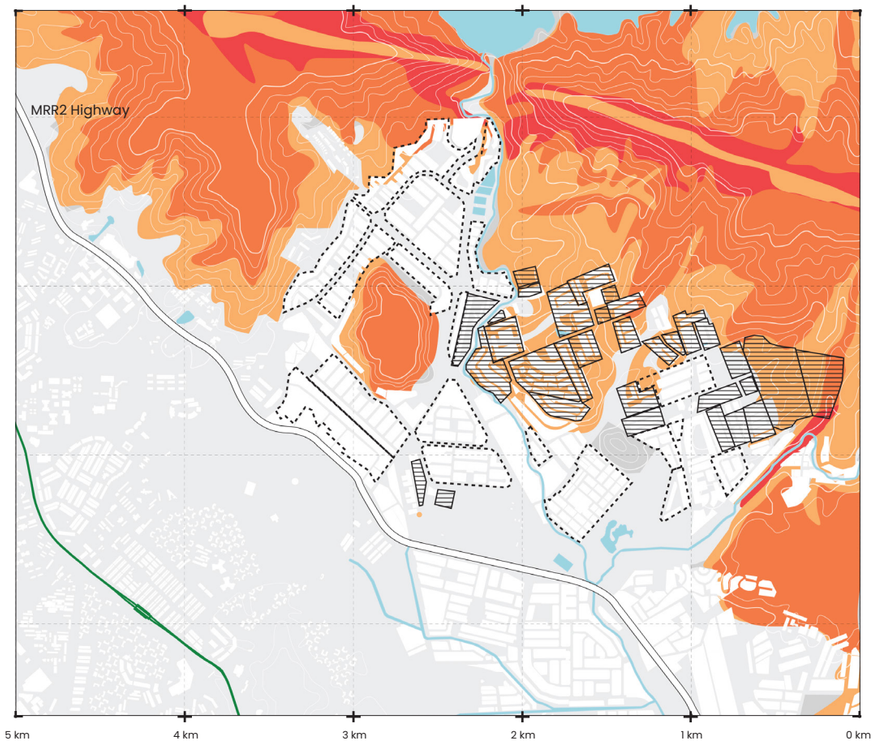
Ecological Risk

Taman Melawati surrounds an ecologically important feature of the state, it houses the Klang Gates Dam, which provides one of the main sources of natural water to the surrounding municipalities and Kuala Lumpur. The lake beyond the dam is protected by the walls of a limestone ridge, giving the skyline a distinct recognisable identity. The higher elevation of the site and the forested surroundings act as a water retention area which prevents flooding during rainy season. These natural features are not only important for ecological processes, but are viewed by the residents as an important reason for their stay. The selling point for many of the newly erected developments highlight the area's proximity to these natural features. This is a complicated dynamic as long-term residents feel protective over these features, but these features are what drew people to the town in the first place, and is now being used to promote the town in a way that is believed to have an overall detrimental effect on its own preservation.

Since the beginning of the town in the 80s, there had been landslides happening every couple of years in this area, the most recent being just last year in 2024, shown in the picture on the bottom left side. Next to it, a new bungalow is being constructed. As mentioned previously, the frequency and severity of these landslides have been correlated to the issue being seen as "unregulated development". It is perceived by the residents as human systems interfering with natural ecological processes. During the collection of survey data, many had indicated a desire for a ceasing of high rise developments, as it might compromise the existing ecology.

The Star (2025)

News Straits Times Press (2024)



Potential Landslide Risk

"Open" neighbourhoods (1980s - 2000s)

"Closed" neighbourhoods (2000s - 2024)

Current land titles for purchase

Transportation & Accessibility Infrastructure

Congestion is part of the daily life of residents living in Taman Melawati. It happens mostly in the main exit to the highway as well as the town centre, as it is the main commercial area serving not only TM but some of the surrounding neighbourhoods. During the survey, most residents answered private vehicle as their main mode of transport when travelling around the town as well as out of the town, corroborating this finding. A majority of them also answered Kuala Lumpur as their main destination, with the Middle Ring Road 2 being the primary route for cars to get to Kuala Lumpur the congestion is inevitable.

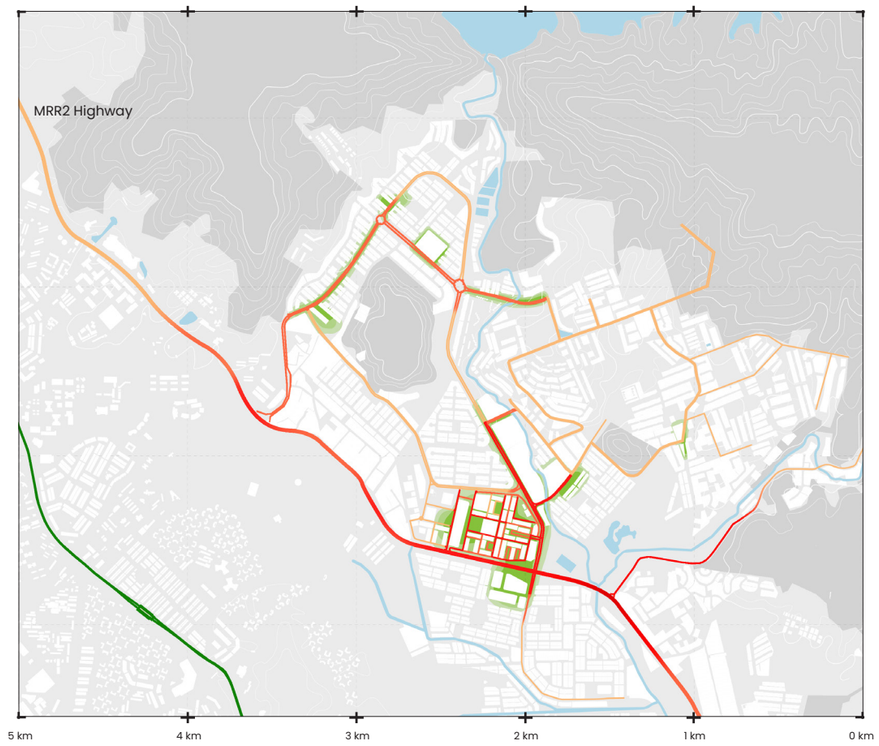
An additional layer of data are the alternative transport options, within Taman Melawati there is only buses. The existing bus routes only circle around the older neighbourhoods of the town. They do not serve the new gated communities, nor the high rises. This can be attributed partially to the road networks being inefficient, as previously mentioned in the findings under 'Sprawl', and also the changes in elevation being challenging for buses to go uphill.

Qualitative analysis reveals another layer of information that suggests why busses are so underutilised even by the residents of the older 'open' neighbourhoods. A brief site visit to evaluate the boundaries of the bus stops and communities shows that there is a complete lack of pedestrian infrastructure. Bus stops are isolated instances that sit along the road, with no accessibility or connecting device. In many cases the road itself serves as a hard boundary against the utility and the user. Despite the unfenced quality of the older neighbourhoods, the access for pedestrians are not clearly demarcated, narrow or extremely run down.

The current conditions of pedestrian infrastructure inadvertently lead to an overreliance on public transport as residents are not encouraged to walk. This is supported by the results of the survey which show that most residents do not feel Taman Melawati is well connected by alternative transport options. However, in a following question when asked if residents would choose alternative transport options if given the opportunity, over half said yes. Many of them cited better pedestrian infrastructure as the main factor

Google Earth (2025)

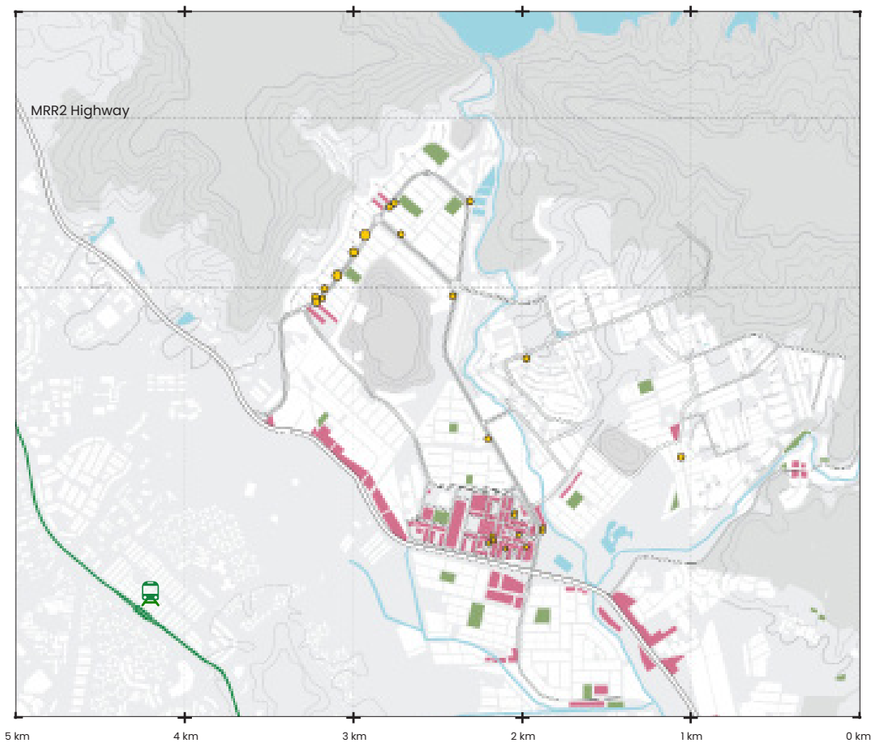
Google Earth (2025)



Public Life

The residents of Taman Melawati do find ways to occupy the available public spaces in the area. Generally, they residents like to go out for jogs or cycle during early and evening hours when the heat of the sun is less intense. Other forms of occupying public space come in the form of informal road side set ups of cafes or stalls selling food items. These set ups often include street furniture and shade that can attract visitors to linger and stay despite the weather. These informal spaces do create a dynamic of conflict with some residents, who see this as a negative as it creates 'clutter' and inhibits the flow of traffic along roads. However, in the survey results most residents have patroned these informal commercial stands at least once. The location of these informal stalls are significant, as they often take place on the edge of communities, specifically along roads. This is doubly due to the proximity to the residents of the community as well as to the visibility of the open road, attracting passers-by in cars to stop and patron the stall. In turn, this creates an exchange that would otherwise not happen along fast moving roads. There are existing commercial areas like shoplots and playgrounds but those places lack amenities for people to dwell and are only used during cooler times of the day. In the survey, many residents also stated that there is a lack of formal community spaces, naming parks and libraries as the main thing they would like to see more of in Melawati.

Google Maps (2025)



Informal vendors

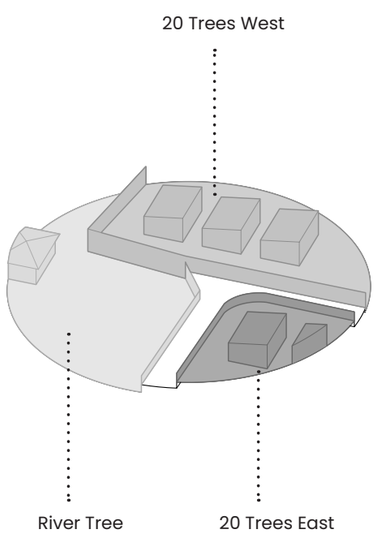
Commercial areas

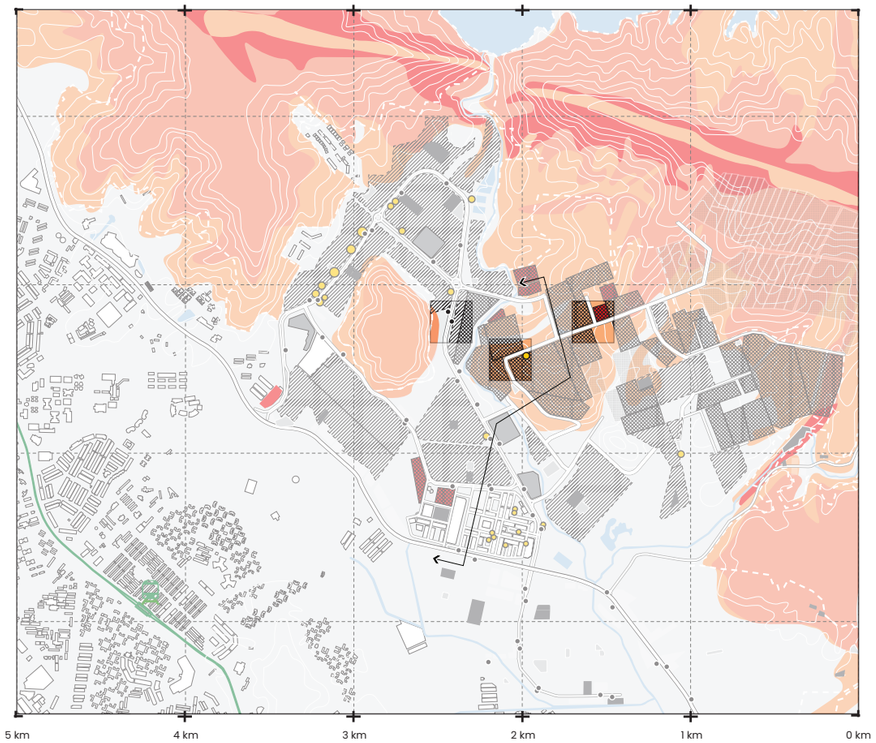
Playing fields

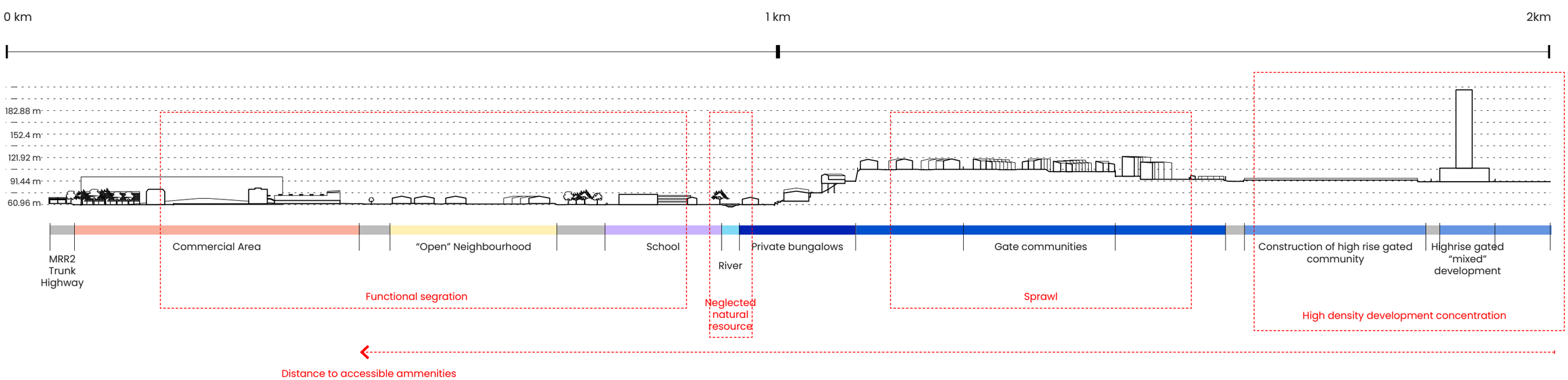
Microborders

Structurally these new developments appear to interlock with each other, forming protected enclaves, making them inaccessible to each other and towards the public. However, there is rarely exchange or flow across their boundaries. The communities that reside within these hidden enclaves become segregated from each other in this case. Their morphology is caused by the shape of the preexisting land plots. With each development, another segment of a road is added to form an armature that might link all the developments with each other. There does not appear to be a clear organising principle for the formation of this linkage aside from having road access. When a section is drawn across the town, each of these communities are comparmentalised in a linear fashion, separated by roadways or fences. The river is hidden behind these spaces, becoming an afterthought.

Google Earth (2025)





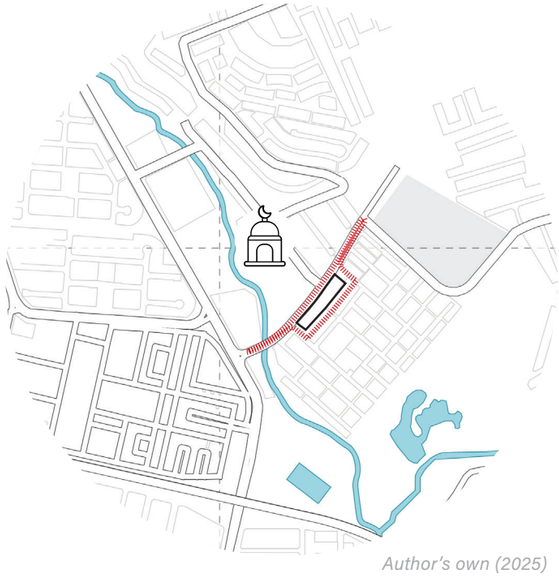


Site walks

Three key areas stood out during the site walks. These three points were focused on due to their significance in the urban fabric due to the types of boundaries formed by the various interfacing uses and communities. These are also located along the length of the Klang River that runs through Taman Melawati. They act as case studies for the lack of cohesion in the urban design of the town, but also as places of potential for future reconnection.

One of the key findings from the trip was the existing conditions of pedestrain infrastructure in the town. The main point being that it is severely underdeveloped. Existing sidewalks are broken and unsafe, and too narrow for accessibility. In some cases, there are no sidewalks to facilitate pedestrian mobility and a lack of crossings to connect different neighbourhoods to each other. Various site walks had to be conducted by walking along roads, as there was no way to approach the site or its surroundings in any other way. This was especially prevalent on Friday, Dec 27, 2025 during the site documentation around the mosque.

In the photos shown bellow, attendees of the prayers have no choice but to traverse across a 4 lane road to get to the mosque despite the popularity of the mosque and the centrality of its location. Across the road is a popular commercial shoplot which mosque goers and local residents alike frequent for breakfast or tea. However if one decides to walk, this necessitates jaywaling across the 4 lane road, risking traffic.



Author's own (2025)

Figure 3 : Diagram which shows the area of the 27 Dec 2025 site walk. This includes the mosque (Masjid al-Hidayah and the shoplot across from it). The road along the msque is Jalan Melawati 6 and the Klang River is next to it along an empty site.

Author's own (2025)

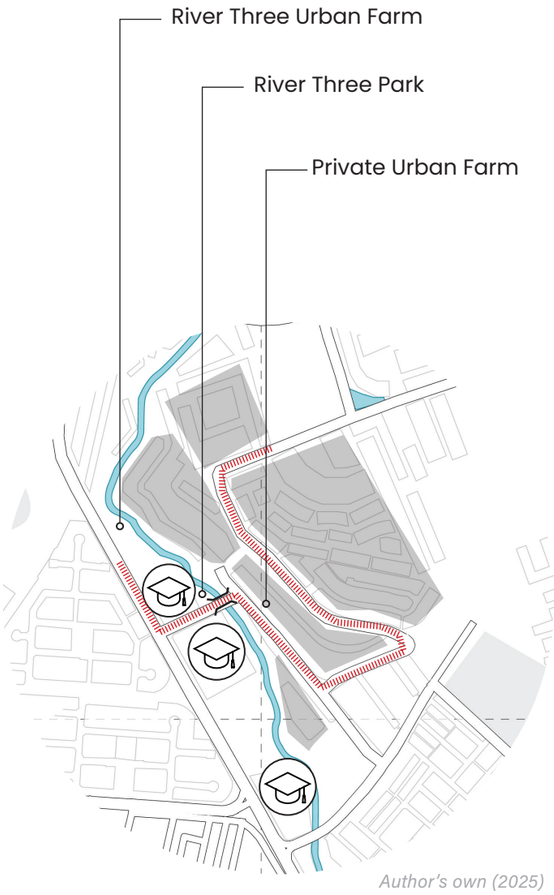
Author's own (2025)

Figure 3 & 4 : Photos show the condition of Jalan Melawati 6 and the mosque goers who have to walk to it for Friday prayers.

The walk along Jalan K5 to Jalan Melawati 5 shows how deep and winding the road networks are due to the boundaries created by the gated developments. The only accessible way to approach the river is by walking around the gated housing and back again. A part of Jalan Melawati 5 includes a bridge that crosses the river that is situated between two schools. However, instead of acting as a bridging device, it actively servers the connection people have to the river, dislocating it from the urban fabric. Despite its proximity to the river there is no direct access. It also serves as a hard border between both schools as the width of the 4 lane road causes the oncoming traffic to be fast moving despite the fact that it is a school zone. Further conversations with AJ Rimba, a local advocacy group reveals that the school principal has petitioned to local government to pedestrianise the road, but received an unfavourable response. This location is important because it is the intersection between 2 schools as well as the headquarters of the local NGO, River Three, who take care of the river and conduct urban farming from this location. Their proximity to the schools help them forge a relationship with the students and teachers and catalyse them to take responsibility over this portion of the river. This location is also where the boundary between public and private begin, as the gate communities start to sprawl over the hillside past the bridge, making it a potential link for reconnection that could facilitate

Google Earth (2025)

Author's own (2025)



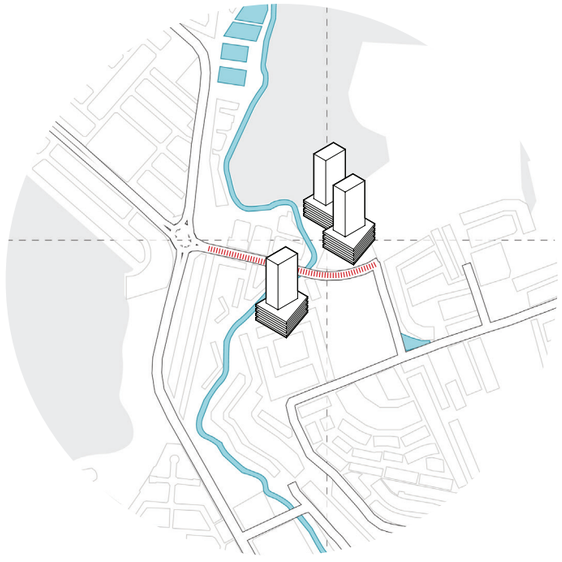
Author's own (2025)

Google Earth (2025)

exchange across communities.

The issue of lackluster pedestrian infrastructure extends across the whole of Taman Melawati. Other examples are Jalan Melawati 4, where despite the high density highrise developments there are no sidewalks for residents, which would require them to leave and approach the high rise only through driving. Existing sidewalks are broken with holes as shown in the figure below. The current conditions of pedestrian infrastructure inadvetently lead to an overrelliance on public transport as residents are not ancouraged to walk. This is supported by the results of the survey which show that most residents do not feel Taman Melawati is well connected by alternative transport options.

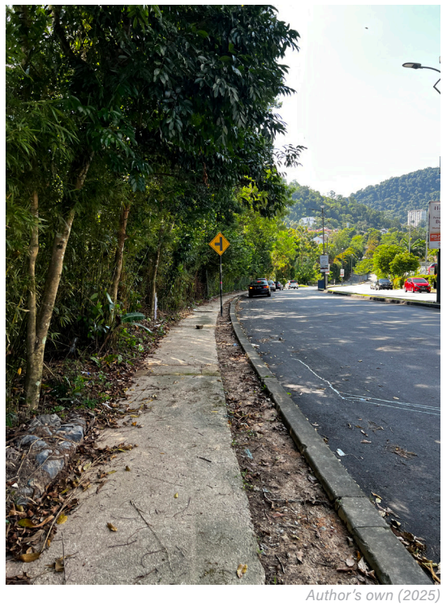
The conclusion of the research points to a complete lack of smaller scale urban infrastructure, such as sidewalks or crossings that could provide local residents access to wider parts of the town, or just parts of the town that have potential to become a public space or a space where these communities can interact with one another. Instead, residents are confined and limited to the existing road network for travel, hereby added to the sense of detachment from the physical experience of the urban fabric. On a larger scale, urban planning has not considered the efficiency and mobility requirements of a growing population in a suburban town, alloting high density developments in unsuitable locations both ecologically and access-wise.



Author's own (2025)

Figure 5 : Diagram which shows the area of Jalan Melawati 4. This includes the high rises (Nadayu 62, Nadayu 63 and LEA by the Hills). Jalan Melawati 4 includes a bridge which goes over the Klang River.

Author's own (2025)

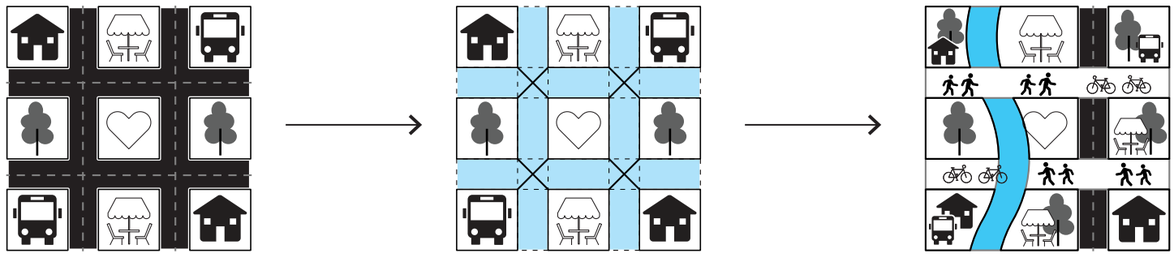


Author's own (2025)

Design Development

The goal from all the research is to achieve a sense of cohesion into this fragmented place. How can implementing a new design unite all of these elements in a way that they don't have to take place separately from each other?

From observing the town, its needs and what some local residents have already begun doing to take care of its natural resources, I derived some design ideas for the proposal to restore cohesion into the town.



Fragmentation

Retrofitting

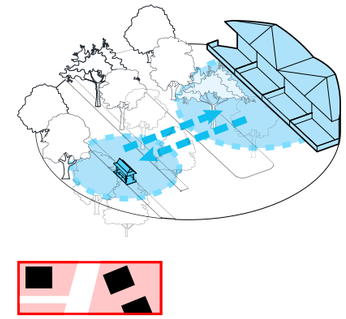
Cohesion

Test Case

To test how a fragmented piece of the urban fabric could be restored, I decided to pick a bus stop in the town as a design exercise in order to generate some deisgn ideas that could be implemented in the wider proposal for the rest of the town. This bus stop is situated on Jalan Taman Melawati, where it its isolated from the rest of the town by being located on the terrain of a hillside and a 4 lane road. It it meant to be serving the Jalan M4 community but it has no connections to allow for any potential access by pedestrian. Its surface area is small and unprotected from the fast moving traffic that passes by it. The intention for this exercise is to take this existing bus stop and return it to the neighbourhood of M4.

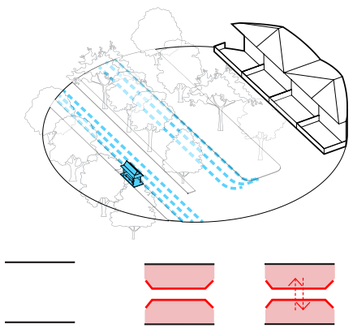
Firstly, the aim is to elevate this location into a potential catalyst for a connective public space for the neighbourhood. By making the bus stop accessible and useable it would mean that other functions can now potentially also take place. Secondly, the aim is to renegotiate the boundaries between the bus stop, the road and the community. The road takes primacy within the dynamics of this small community, creating a very isolating effect. To mitigate this, the road can be narrowed to slow down traffic and create a more intimate space for users. This narrowing also pulls the bus stop physically closer to the neighbourhood. By having a better visual sightline as well as access, the residents can feel a sense of ownership over this stop, potentially creating a new dynamic that would give primacy to this connective public space. Finally, by having new infrastructure in place, the hard boundary between busstop-road-house, can become more porous. The existence of this infrastructure will invite the residents to participate in new kinds of public life together, allowing for the exchange that is lacking in the urban fabric of the town.

Now how to do this with architecture.



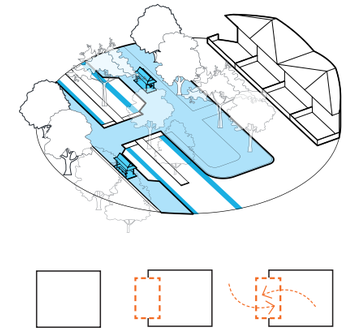
Creating a 'patch'

Creating a site with multiple interfacing of communities and uses as a catalyst to rebuild cohesion.



Renegotiating boundaries

Closing the gap between two spaces, forming a more intimate connection.



Creating a 'gradient' space

A space with soft boundaries for public use but still under the responsiblity of the adjacent community.responsibility for.

a more intimate space for users. This narrowing also pulls the bus stop physically closer to the neighbourhood. By having a better visual sightline as well as access, the residents can feel a sense of ownership over this stop, potentially creating a new dynamic that would give primacy to this connective public space. Finally, by having new infrastructure in place, the hard boundary between busstop-road-house, can become more porous. The existence of this infrastructure will invite the residents to participate in new kinds of public life together, allowing for the exchange that is lacking in the urban fabric of the town.

Since the river runs the length of the town, I believe that it can become a key connection point for the whole of TM. As my overall proposal. I want to propose 3 catalyst 'patches' that will serve as a entryway for the adjacent communities into the river. The river itself will host a walkway, becoming a new mode of access for pedestrians throughout the town. The surrounding communities will be brought closer by applying the design ideas, the new space between them now serving a public space for exchange and access into the river. By concentrating all this disparate activities and communities around the river, it makes the river relevant to the residents, who will hopefully feel a stronger sense of responsibility over it.

Existing bus stops

New access routes

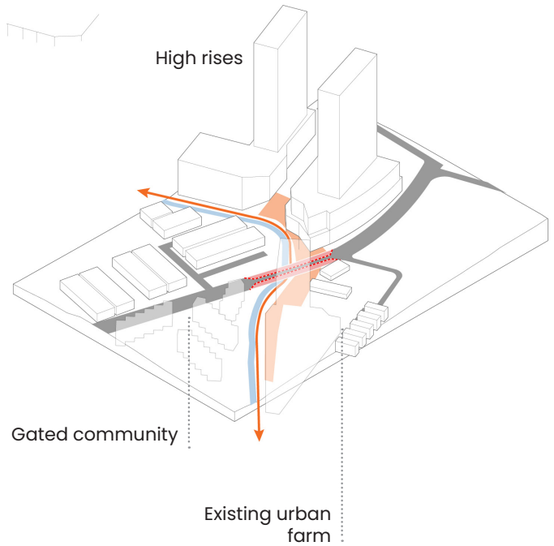
New bus stops

Pedestrianised walkway

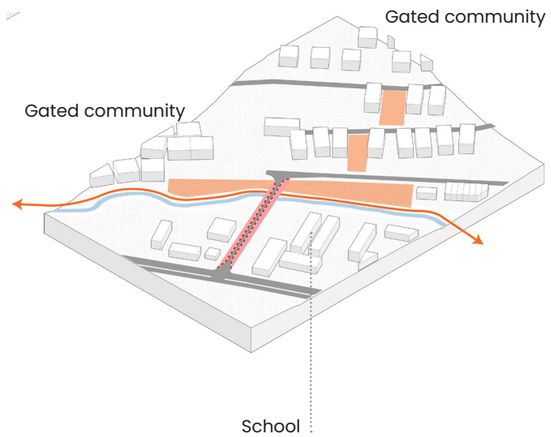
Design Proposal

Overall Proposal

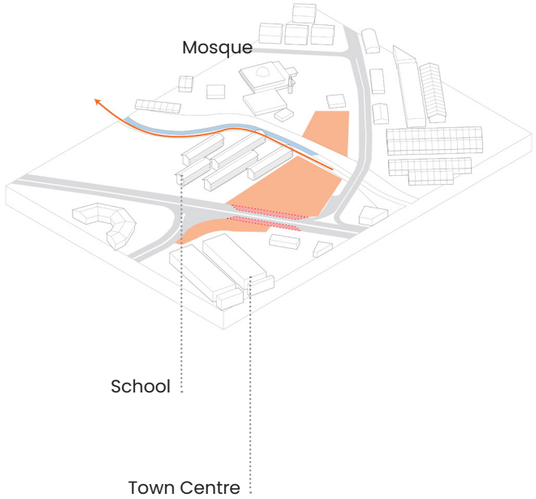
Here we see the first access point. The site is to the north where various highrises are located. These high density builds are more disconnected from the town due to its elevation and distance. By utilising the spaces underneath the high rise, residents can have a public space that is adjacent to the river, the road bridge becomes the access point to the walkway passing under it. Bringing people down to the level of the river to engage with it.



The second patch is located between two schools, an NGO, a four lane road and several gated communities. The unused spaces between the private houses becomes a pathway for the hilltop residents to come down and participate with the rest of the town. This puts the river in a more significant position while highlighting the work of the school and the NGO in maintaining the river.



The final site, which is also the site of the architectural intervention, connects the town centre, a primary school, and a mosque. This intervention creates a new status quo for the town by introducing a completely pedestrianised street, so that a safe passage is created for students of the school and the mosque attendees.



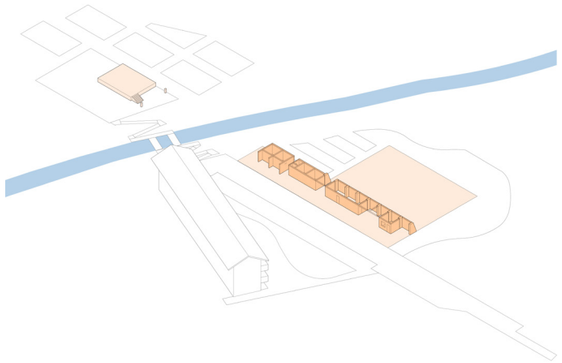
Masterplan

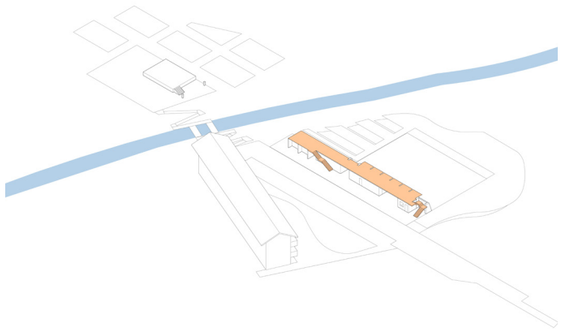
In this masterplan, this street is highlighted by a distinct brick material which indicates the significance of this passage. Here you can see the gesture of the street, that extends from the town centre to the mosque. The existing programme of the school canteen and gymnasium are reorganised to be open to the public. This streets goes down to a small bridge, which sits just above the water, bringing people down to the level of the river, once again giving it more significance, before going up into the second half of the building, which are the proposed new headquarters for the River Three organisation who have been spearheading efforts to take care of the river up until now.

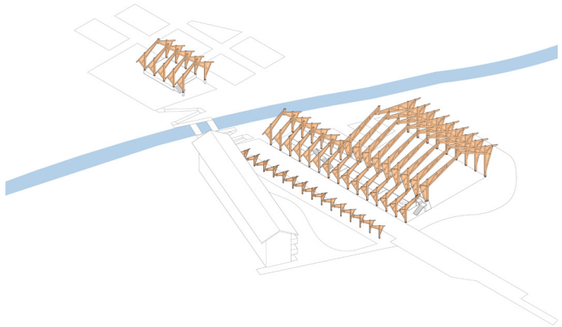
Surrounding this building is more land for urban farming that can be given to interested parties all throughout the town.

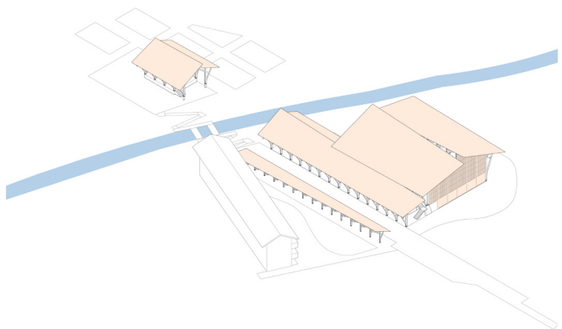
Building Programme

It starts with a masonry structure, which will be the same material as the street's paving, giving the building a sense of continuity. This structure houses the services such as kitchens and food stalls, and logistics point. It also houses the changing rooms and toilets, and interfaces between the exterior street and interior gym environment. Over the structure is additional seating, as well as a viewing platform for activities on the street, taking place in the gym, the playground outside the gym and over the river. These activities are housed under a double curved timber roof structure. This double curved structure is formed by the straight timber trusses by progressively rotating them in 2 planes. This geometrical logic is then applied to all the roofs, becoming the main architectural language of the building.

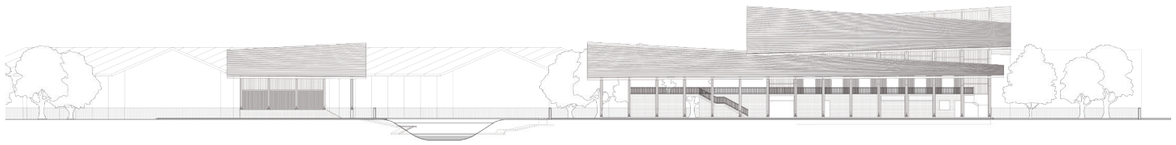






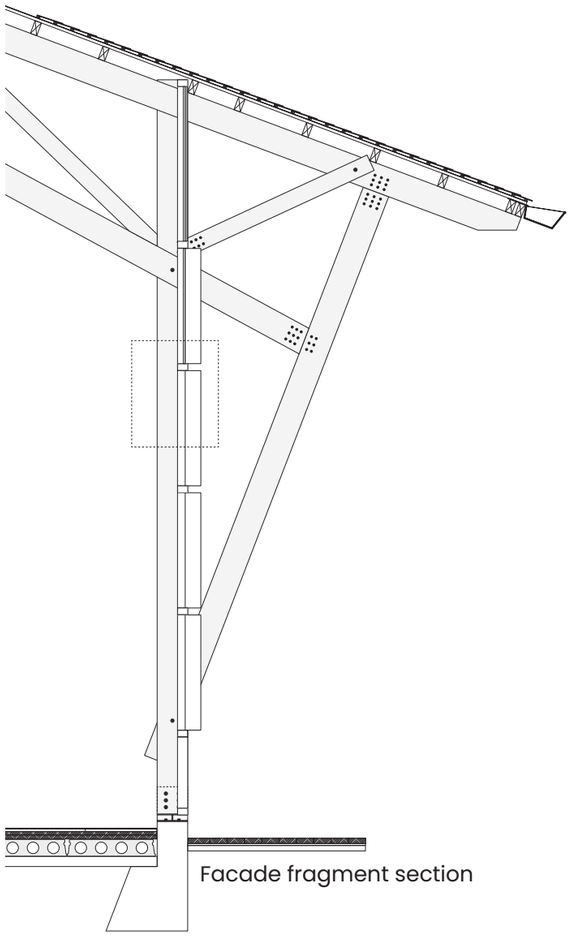


This geometry is expressed more clearly in the elevation of the building, where the curve of the roof can be seen to rise to a point, breaking over the river where the emphasis is placed on the low bridge and the connection between the user and the river. However that rise is returned on the other side with the NGO building carrying on the rest of the curve. This geometry links these buildings together under the same roof.

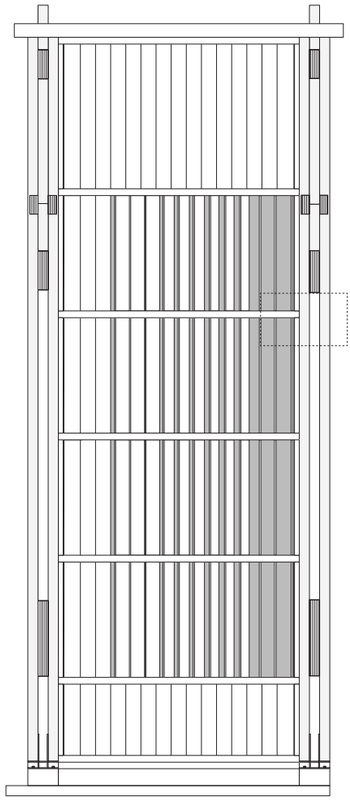


When seen from the South elevation, the facade is a series of louvres held up by framed panels attached to the structure. These panels mirror the line of the roof, succesively growing higher to meet the ends of the roof, giving the geometry a sense of continuity.

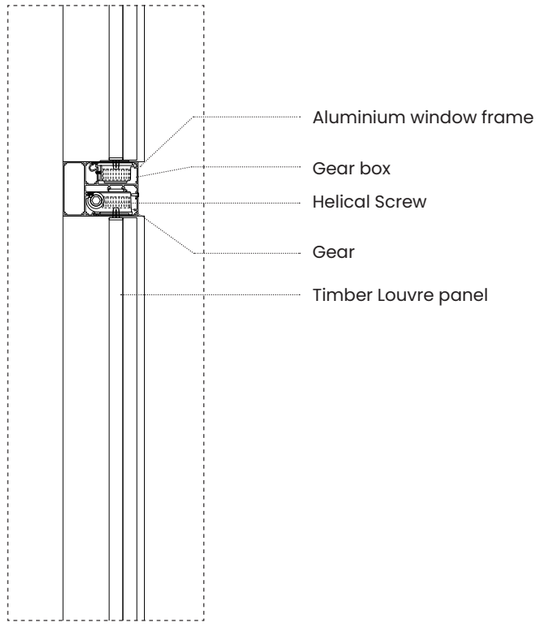
The facade is a lightweight mechanical louvre system, which can be manually rotated to allow light and ventilation into the building according to the needs of the users. The timber louvres fit into a frame which has gears on either end. These gears sit in a gearbox next to a helical screw. The helical screws are joined by a long bar attached to a 90 degree bevel gear at the end. This whole system is held up inside the frame of the louvre panels. When the crank handle is rotated at the bottom, the louvres can be manually opened in varying configurations. Which also varies the facade of the building.



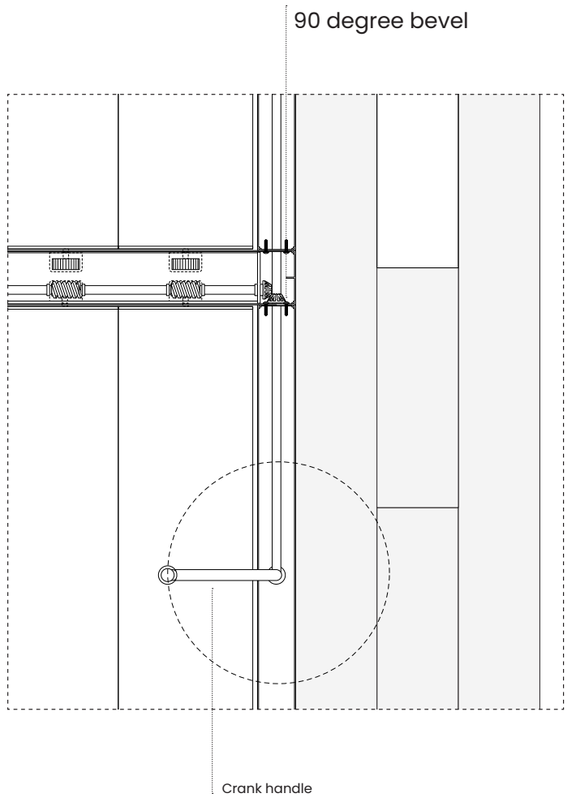
Facade fragment section



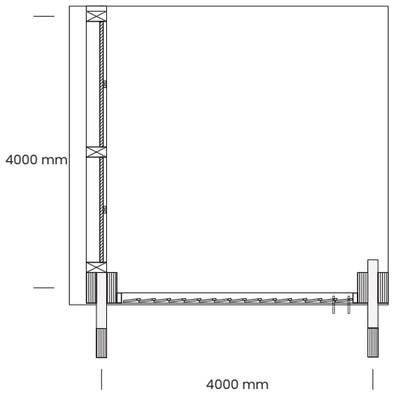
Facade fragment elevation



Facade system detail section



Facade system detail elevation cutout

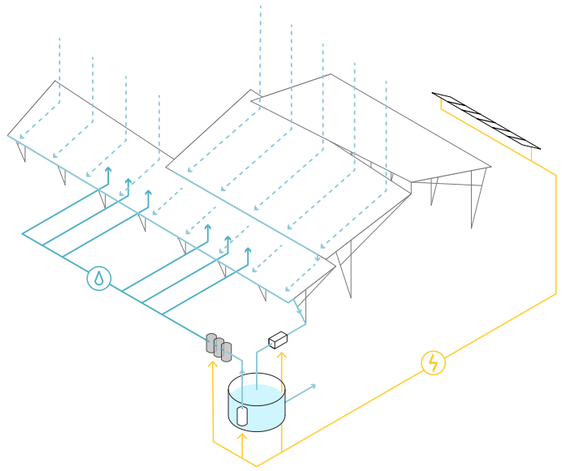


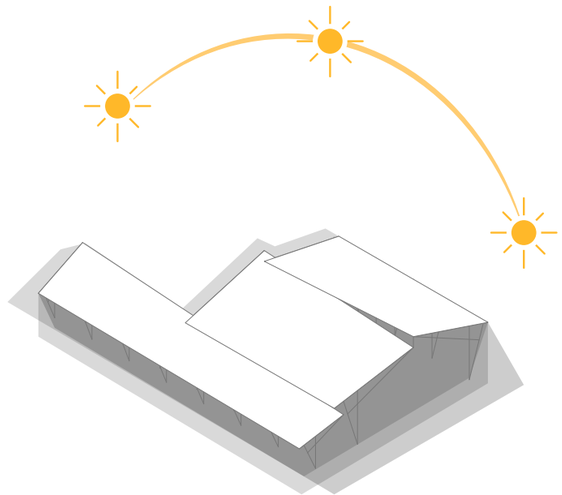
Facade fragment horizontal

Climate

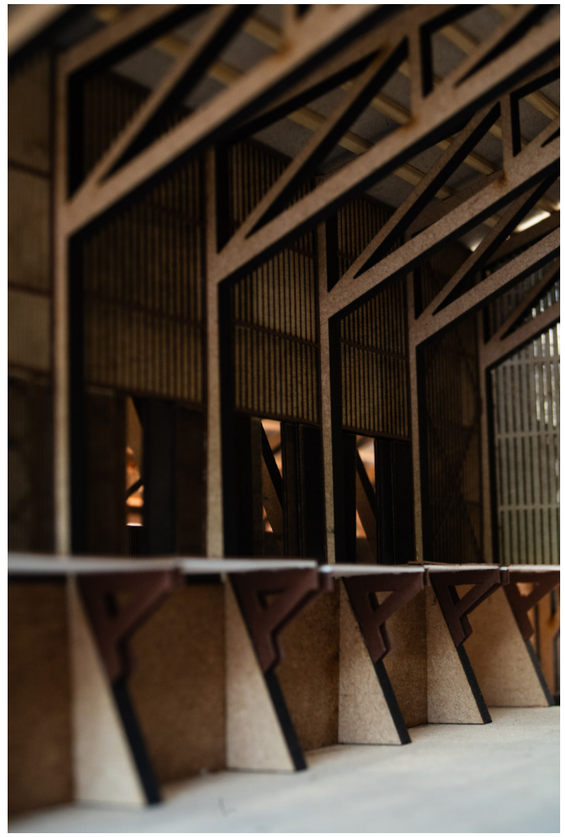
The form of the building takes inspiration from the passive climate design of traditional Malay buildings. A lightweight facade does not to retain heat in the tropical climate of Malaysia. The large overhang of the roof helps provide shelter from heavy rains and sun from the crucial connections of the structure, while giving additional shade to the users of the street.

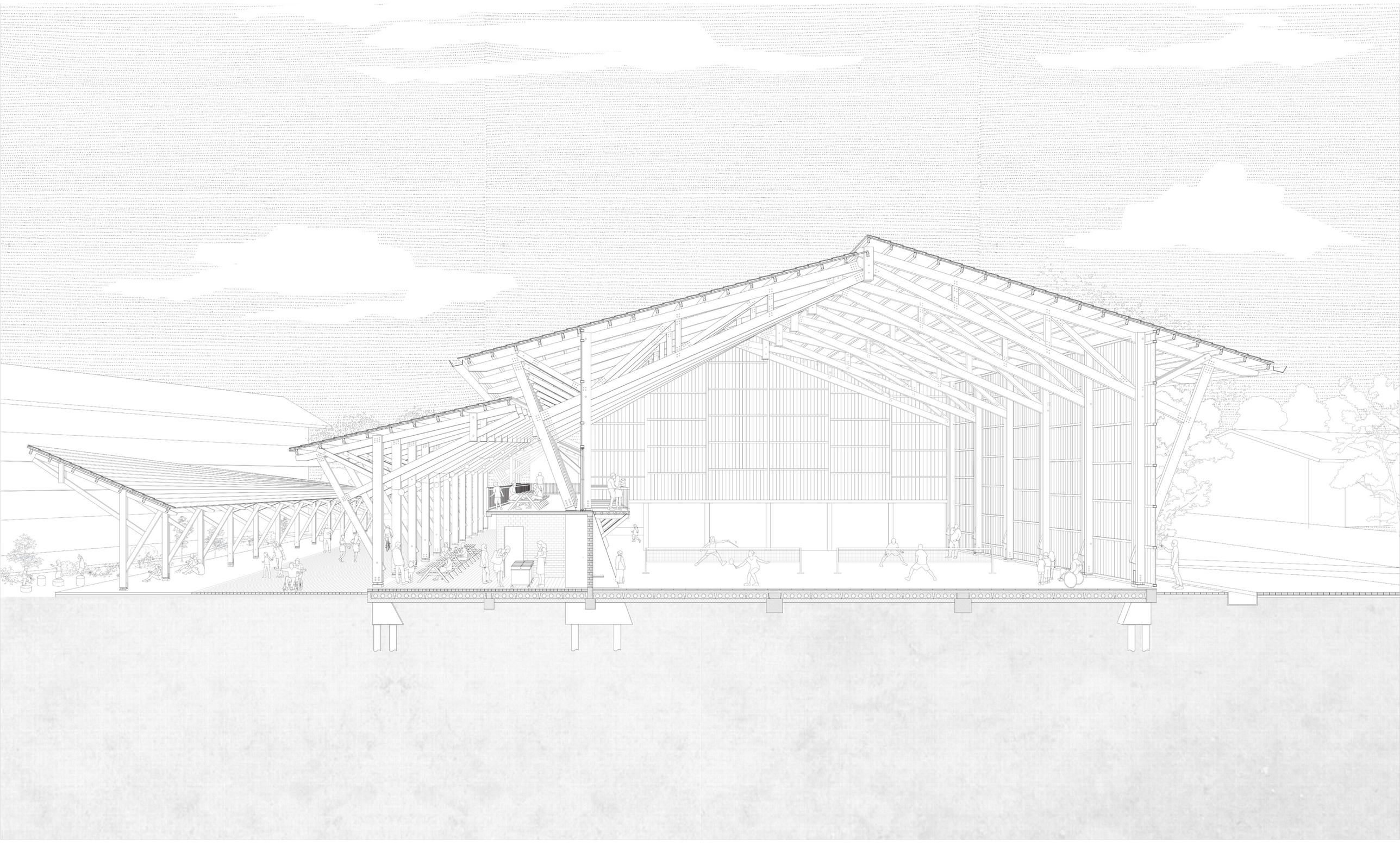
The shape and geometry of the roof are ideal for collection rainwater for rainwater harvesting, as the water is directed to a single point, allowing for efficient collection. Meanwhile, due to the mechanical function of the facade, the level of ventilation experienced by the gymnasium space can be varied according to the needs of the users.





All the parts of the building come together to become a hospitable place for the public life desired by the residents of Taman Melawati. This architecture is more than the sum of its parts, as it opens up the Taman for the people who live there to become more engaged with other communities as well as the existing ecology. It turns an inhospitable place into space that is not just a single destination point but a small street that facilitates new connectivity within the town. This design takes from traditional knowledge and applies it in a way that shows that these practices still have a place in modern society. It gives a community that is desperate to grow, to innovate and to reconnect that there is still a place for them.





Reflection

What is the relation between your graduation project topic, your master track (A, U, BT, LA, MBE), and your master programme (MSc AUBS)?

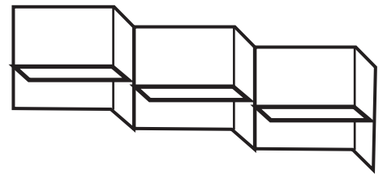
City of the Future is a studio which values the multiplicity of perspectives for architectural practice. This multidisciplinary approach is necessary when approaching my topic of interest for this graduation project which, despite being a global issue, is grounded in its own cultural context. The fragmentation of this specific West Malaysian suburb is a combination of policy, economics and the aspirations of the Malaysian people. Architecture is not exempt from the multiplicity of forces that shape the urban environment. Having a good urban structure creates opportunities for good architecture which is relevant in any architectural pursuit. For a place like Taman Melawati, where the prevailing typology are gated guarded housing estates, a new status quo needs to be introduced, not just to densify but to diversify, closing the gap between the different communities in the town. This design proposal is a way to explore how the new status quo could work in this town by incorporating pre-existing use cultures, and the wishes of the local community. By proposing a physical space in which they can take place, it legitimises these informal practices that have been trying to take hold in the town.

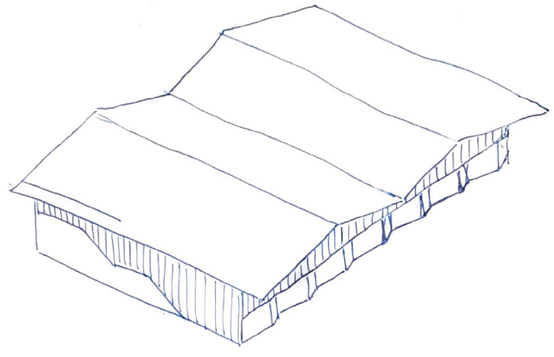
How did your research influence your design/ recommendations and how did the design/ recommendations influence your research?

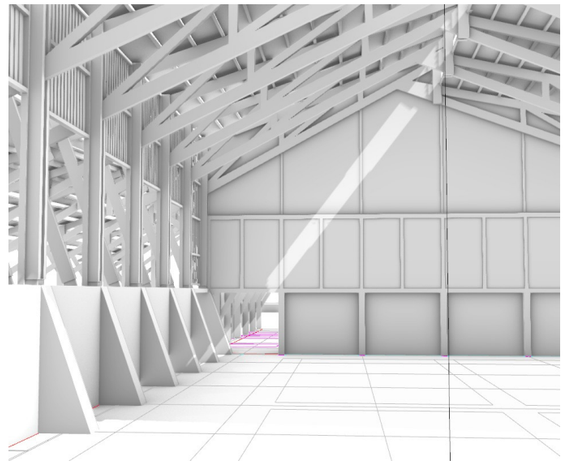
The multidisciplinary approach of the studio formed the methodology of the research, which included exploring the makeup of the town through a few different perspectives. These include: governance, policy, networks, morphology, economy, use and perception. From a designer perspective there is usually little one can do about the state of governance and policy. Therefore, the design moved into a more bottom-up approach whereby the introducing of new spaces can galvanise the need and want for these places to exist. The research also showed that the town had many hidden potentialisites that remained disconnected due to the fragmentation and incohesion of the town, and the design proposal could possibly realign these potentialities for the further benefit of the town.

How do you assess the value of your way of working (your approach, your used methods, used methodology)?

I mainly worked with hand drawing throughout this process. Hand drawing allowed for visualising atmospheres and ideas that might not be fully thought out yet. Even though a lot of these ideas may pass through or seem incongruent, they still could be incorporated down the line in different ways. In the initial stages of this design, there was a desire to incorporate a rest area for users of the sports hall. This came in the form of an angled facade where there would be seating in the nooks of the angles where the wall the seating was mounted on would be made of perforate bricks. This design did not come to pass as the language and spatial quality did not make sense. However there still needed to be seating for the players. Latser in the design it came back in the spaces between the foundations, where small nooks were created in the depressed wall, which is made of brick. In this case, there was an understanding that the material quality, which is brick would remain, but the space and design evolved with the structure of the building to find a place for itself within the final iteration of the structure. This way of working flows naturalistically with the way the design evolves, and does not impose itself based on an insistance of the specific type of shape the space needed to be like.







How do you assess the academic and societal value, scope and implication of your graduation project, including ethical aspects?

As globalisation continues to push rapid growth of cities around the world, towns and neighbourhoods that are pushed to support the growth of these cities are subject to unmitigated development as a result of necessary growth. This creates suburbanisation of an area that loses its former identity, becoming a satellite town to serve a larger metropolitan area. As the town expands rapidly without an established plan, newer areas lack the infrastructure and transport networks to connect people to spaces and to each other. The trend towards high rises and gated communities leaves public spaces to become transitory non-places only reserved for automobiles. My graduation project looks at Taman Melawati in Malaysia as one of the many case studies of a growing town which is facing these issues, and seeks to retrofit it to give current and new residents a place to connect with where they live. This project builds on existing knowledge in practice about place-making and urban planning in order to realise this intervention, but pays attention to its context to create a site specific retrofit. The research I have personally done will not only add to knowledge about Malaysian suburban towns, but highlight the possibilities for a better future and community.

How do you assess the value of the transferability of your project results?

This project is the first to be carried out in the town of Taman Melawati, as such I believe that it is a highly valuable exploration into how suburban Kuala Lumpur and Selangor could better their existing structrue for future growth. This comes at a time where these issues of city plagues such as congestion, pollution and disasters are increasingly prevalent. But now it is reflected not only in high densoty metropolitan cities but also small towns. This betrays a larger issue that speaks of factors beyond the complexities of a fast moving city which shold be addressed and analysed. I believe that this research shows good practice into how one can evaluate the state of their site's urban fabric in order to view the fragmentations as well as places of potential, so they can strive to reconnect it again.

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