



Affordable Housing Development

NEIGHBOURHOOD HOUSING - BANTING & DENGKIL

**MOHD ZAIRUL
UNIVERSITI PUTRA MALAYSIA, SERDANG
2021**

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Preface

Housing preferences are normally correlated with the status of one's financial economy. Buying a house is also considered as the top bucket's list for each Malaysians (Abdullah et al., 2012). The increase in housing demands due to change of lifestyle has increased recently. At the same time, rapid growth in the urban area has caused a high migration from the rural area to the city areas. According to the United Nation, (2019), almost 50% of the world's population now residing in the city areas. Based on the census from the Department of Statistics Malaysia, (2015), almost 75% of Malaysians currently living in urban cities throughout Malaysia. The United Nations estimated that by 2050, 80% of the population will be living in the city areas in Malaysia and will be called an urban population (United Nation, 2019). This will increase the needs of housing, especially in the urban areas, especially among the young urbanites.

In this research, the term 'young urbanites' is used to describe the people of a certain age (25 -40 years old), at the start of their careers both on the business and the housing market. While Zairul, (2017) labels them as young starters. The needs to own a house and access to affordable housing have always become the main topics by the government of the day. Several programs to support first homeownership have been planned and implemented to support young urbanites who grappling with financial to secure the house to live (Jabatan Perumahan Negara, 2018). House ownership has been categorized as the biggest investment one's need to put in their life, further some authors associate house ownership with a status of living, stability and financial status (Diaz-Serrano, 2009; White, 2017). Several studies have attempted to identify housing preferences in Malaysia but not focusing on young urbanites in the city centre (Kam, Lim, Al-Obaidi, & Lim, 2018; Khan, Mahamud, & Kamaruddin, 2012; Zainon, Mohd-Rahim, Sulaiman, Abd-Karim, & Hamzah, 2017). Therefore, the needs to attempt the preferences among house buyers in the urban areas in Malaysia is crucial.

This book will highlight several solutions toward affordable housing in Malaysia specifically in a sub urban area in Dengkil and Banting. Since 1957, the housing provision has been part of the national development's plan called the Malaysian Plan to ensure the rakyat's will benefits from the country's development and prosperity. Undoubtedly, customer's satisfaction in the neighbourhood plays an important role to ensure the stability of the government and to create a progressive development country such as Malaysia (Suffian, 2013). Under the 5 years Malaysia Plan, the government has put several plans with the help of the private developers to spur the economy through new housing policy and incentives to support the nation's economy and recently under the new housing policy, the government is focusing towards improving accessibility and affordability of housing, improving housing and transportation coordination, good quality housing for all, quality and cohesive neighbourhood, and finally strengthening institutional capabilities to deliver the policy (Jabatan Perumahan Negara, 2018). Therefore, a lot of studies need to be done to ensure the National Housing Policy can be achieved within a stipulated time.

As mentioned, the numbers of overhang properties have increased, with the first half of the year mainly denominated by units priced between RM200,000 and RM300,000, which are commonly perceived as "affordable". According to the National Property Information Centre (Rasid, 2019), the six-month period saw 32,810 residential units worth RM19.76 billion unsold, 1.5 per cent more than the 32,313 unsold units worth RM19.86 billion recorded in the first six months of 2018. This is despite a fewer number of new launches in this year's first half, which saw 23,591 units came to the market, almost halved the number of units launched in the same period last year units in the property sector raises questions that related to issues of social wellbeing of the buyer (Rasid, 2019). Therefore, it is important for the developers and the authorities to ensure the houses built are according to the demand from the potential house buyers which mainly the young urbanites in the city centres.

Mohd Zairul (2021)

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Dengkil

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Proposed Urban Interention

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x Case Study
x Site issue Synthesis

x Banting Site B
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x Site issue Synthesis

x Dengkil Site A
x Case Study
x Site issue Synthesis

x Dengkil Site B
x Case Study
x Site issue Synthesis

Proposed Neighbourhood Housing

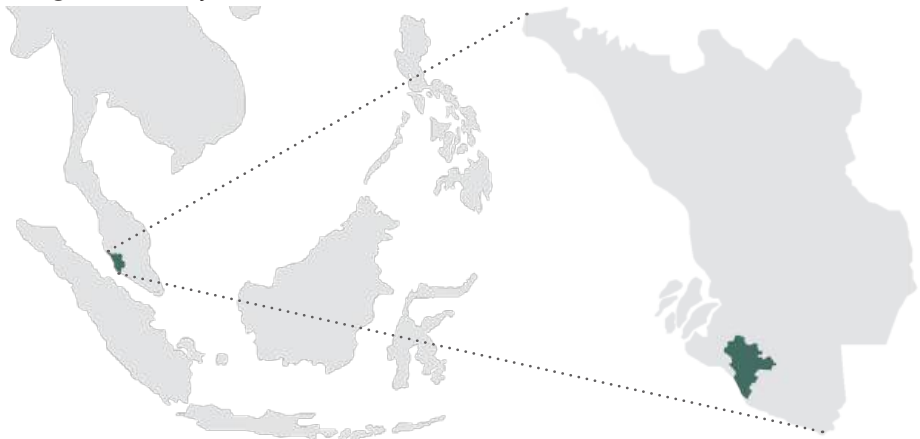
x Banting Entrepreneur Village - Aryton Kong
x Social Catalyst Flexible Housing - Chan Kei Wern
x Repose Village - Lim Chin Khai
x Banting Neighbourhood Exchange - Muhammad Adlin
x Green Modular Living - Mohamad Nuruddin
x Collective Living : Urban Village - Tan Yanxian
x Harmony Living - Tee Soon Hin
x Biophilia Residence - Wee Keng Ean
x Flexi Home - Wong Yoong Sheng
x Active Corridor Living - Yen Wei Zheng

Banting

Introduction

Background

Banting is located at the district of Kuala Langat; at the South-West of the state of Selangor. It is part of the Kuala Lumpur Metropolitan Region (KLMR). The name of this Banting is taken in conjunction with the name of the buffalo that farmers used to use to plow rice fields which is called as banteng. The area of banting town is 105,367.51 hectares with a population density of 26,062. Banting is the main administrative, business and service center for kuala langat district. It is also acts as an agricultural center such as oil palm plantations, poultry farms, betel leaves and have a number of industrial areas. The postal code for Banting is 42700. It is situated on the banks of Langat River (Sungai Langat in Malay).



Chinese Village on Langat River,
1874



Sultan Abdul Samad's Residence,
1875 Sultan Abdul Samad's
Residence

Historical Background

During the rule of Sultan Abdul Samad Ibni Almarhum Raja Abdullah (1857 - 1898), the seat of power was moved to Bandar Temasya (Jugra) during the Klang War (1868). Bandar Temasya blossomed into a Royal Town and it was significant in the advancement of Selangor. This was fundamentally because of its location on the coast, which made it appropriate for a riverine and marine-based administration system.

River navigation was made safe due to its location near the riverbank of Sungai Langat and natural protection provided by the nearby Carey Island. It attracted neighbouring population and traders from Sumatera and Bugis. After the death of Sultan Abdul Samad on 6 February 1898, his son Sultan Alauddin Sulaiman Shah succeeded the throne.

The decline of Bandar Temasya and Jugra began early in his reign and finally due to the power struggles within the palace, the seat of power was moved back to Klang in 1903.



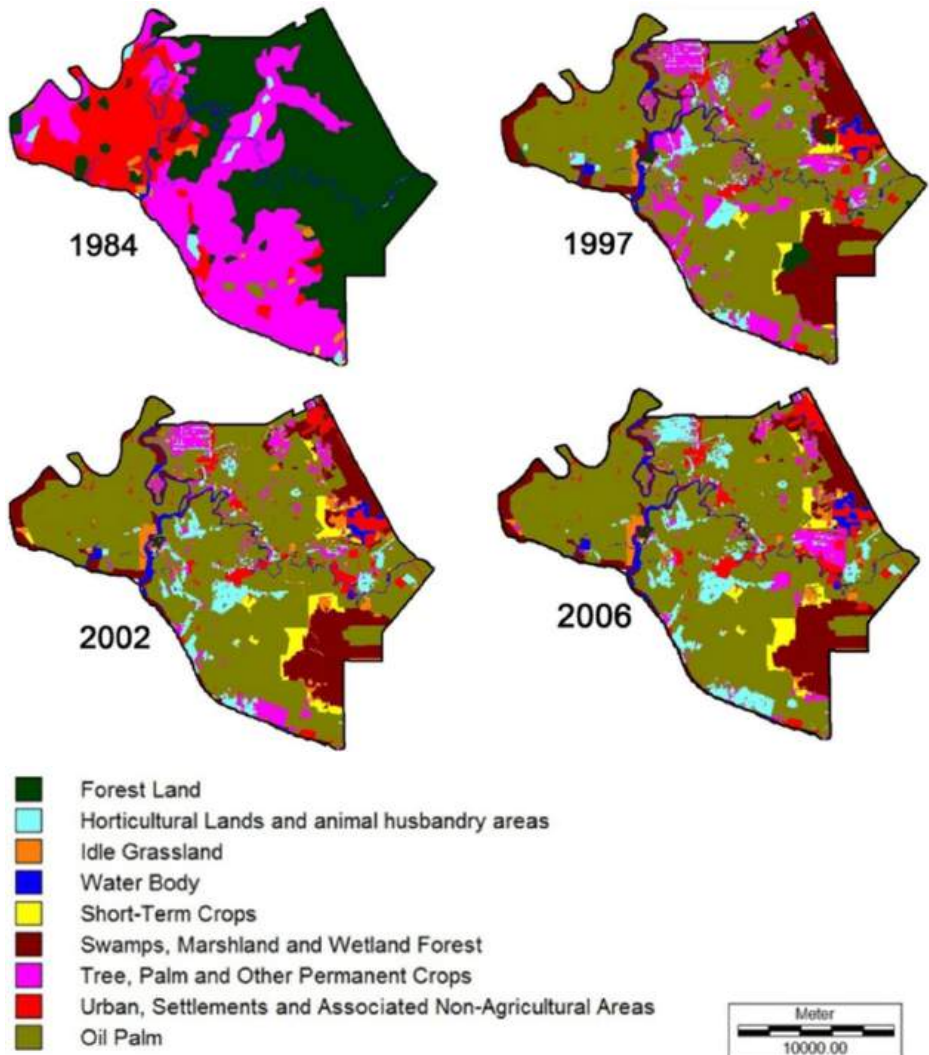
Sultan Abdul Samad(Left)
Sultan Alauddin Sulaiman
Shah(Right)



Sultan Abdul Samad in front of the
Istana in Jugra 1886

Growth of Kuala Langat

In the early 1900s, Kuala Langat's main economic activities revolves around the Langat River and the sea. In the early 1990s, oil palm plantations increased dramatically. In the 2000s, Kuala Langat experiences major development due to Putrajaya, Cyberjaya and Kuala Lumpur. Now Banting becomes the economic centre of Kuala Langat.



Literature Review

Small Town Revival

Small towns are facing more significant challenges than a developed city but they also have great opportunities to be explored. Therefore, it is crucial to introduce smart growth strategies as a critical component of **small town revival** in order to improve and rejuvenate neighbourhoods and towns.

Small Town

A build-up area with a name, defined boundaries, and local government, that is larger than a village and generally smaller than a city

Revival

An improvement in the condition, strength, or fortunes of someone or something



Connectivity

Poor road network and connectivity may be the cause of under-developed area



Property

Lack of housing options, insufficient property and poor infrastructure, affecting economic growth rate



Demography

Ageing populations that tend to be lacking in vision and leadership, causing shrinkage in local population.



Economy

Economic growth rate decreases or stagnant, communities face the prospect of losing their commercial and social foci.

Urban Rejuvenation

Under Malaysian context, the programme **PEMBAHARUAN SEMULA BANDAR (PSB)** is an Urban Rejuvenation programme which is comprehensive and integrated for the long term for addressing issues of economic recession, physical obsolescence, environment and urban social issues aligned with vision and policies of development by the government.

- The increasingly limited supply of land requires action more efficient planning and use of urban land.
- Injecting new synergies through realignment of areas existing development in line with current and future life.
- Reduce development on the greenfield thus can simultaneously address the issue of urban sprawl.
- Generate more employment opportunities and economic activity.
- Meet the needs of local people to improve quality of life environment.
- Encourage more use of existing infrastructure and restore cheerfulness and the charmness old-town area

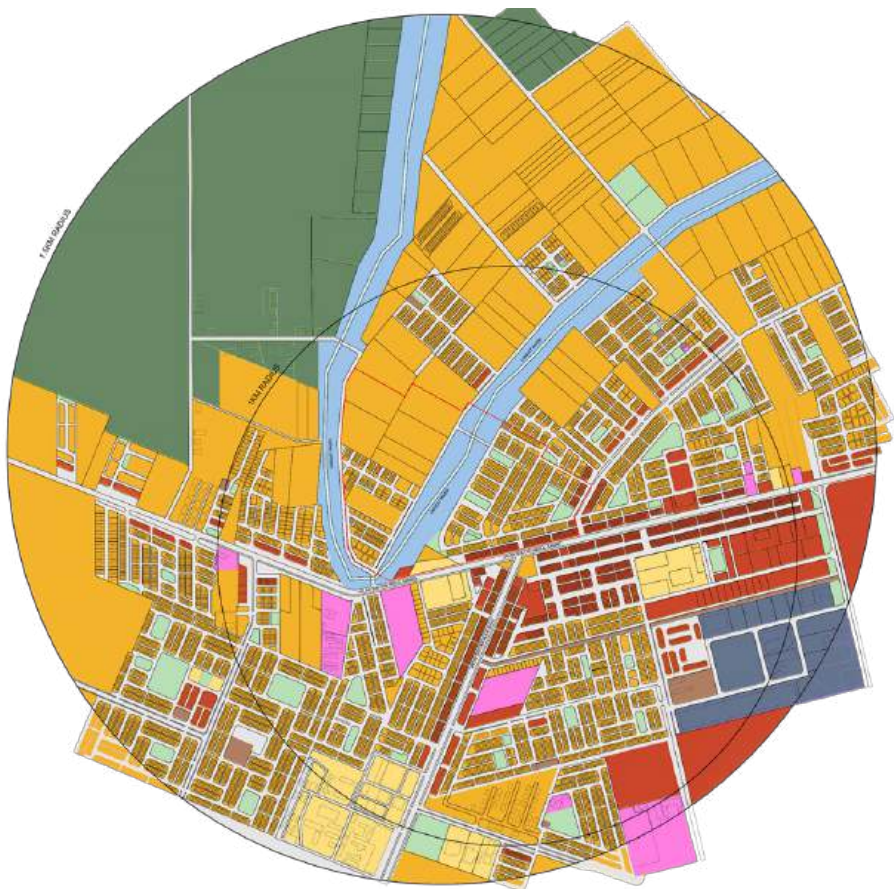
General Information

Overall Masterplan



Banting is the main commercial town of Kuala Langat. Two main routes intersect in the centre of the town. These routes are namely Jalan Sultan Abdul Samad and Jalan Sultan Alam Shah. These routes are the main channels to access and exit Banting, and they are the main networks to go to Kuala Lumpur, Putrajaya, KLIA, Jugra, and Morib.

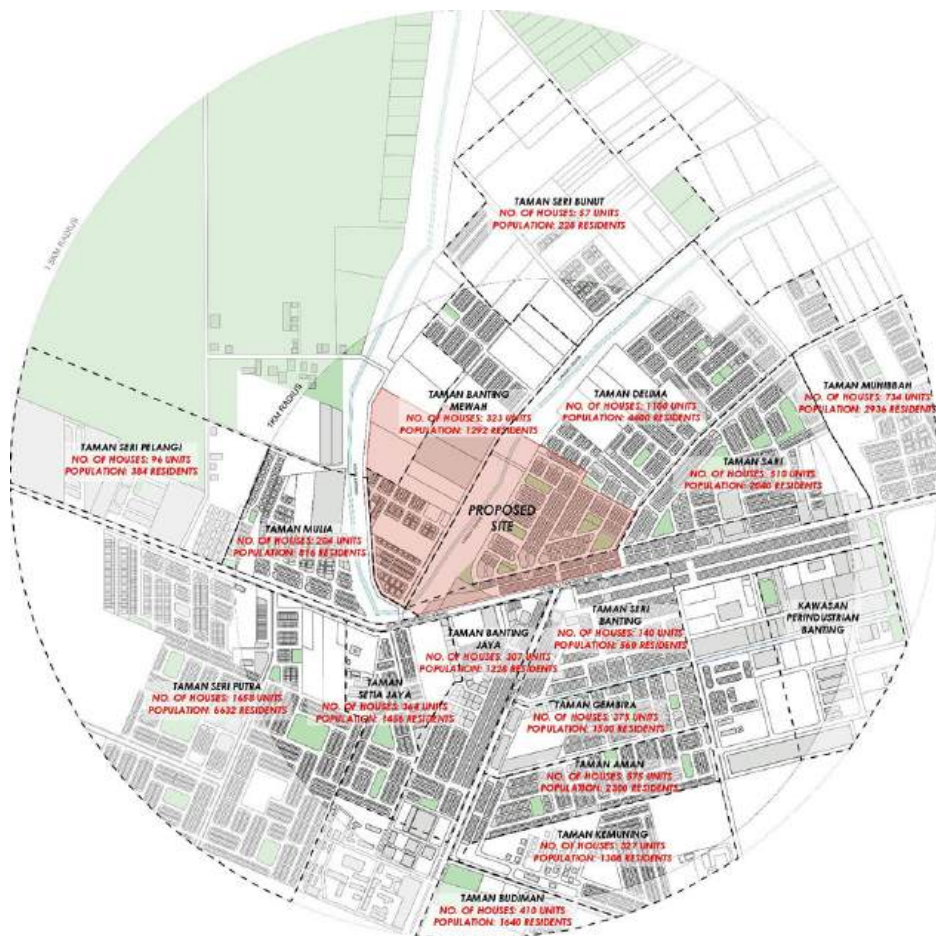
Zoning Plan



TABULATION :

LEGEND	ACREAGE	%	LEGEND	ACREAGE	%
RESIDENTIAL	721.46	40.4	GREEN AREAS	45.95	2.6
COMMERCIAL	118.45	6.6	RIVER	10.84	0.6
INDUSTRIAL	44.65	2.5	RIVER RESERVED	92.54	5.2
AGRICULTURAL	303.02	17.0	UTILITIES	11.59	0.6
INSTITUTIONALS	35.36	2.0	R.O.W	352.39	19.7
GOVERNMENT FACILITIES	49.69	2.8	TOTAL	1,785.94	100

Demographic



Population in whole Banting = 100,000 residents

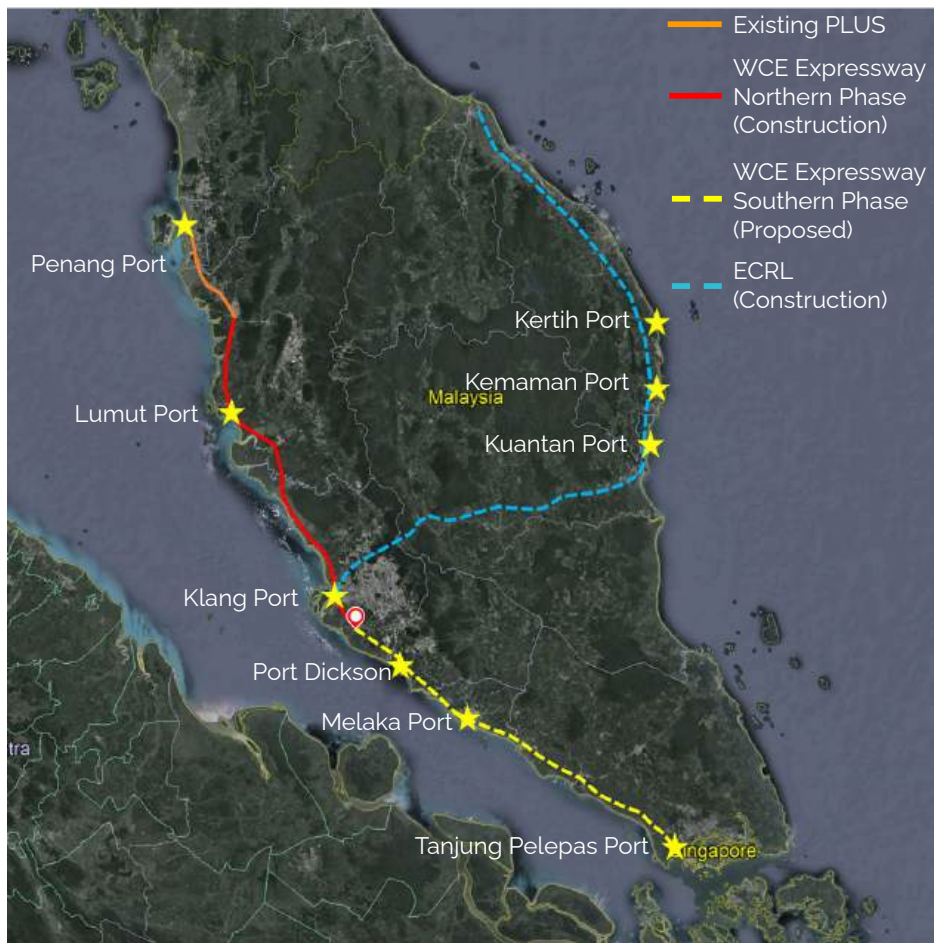
Total no. of houses within 1.5km Radius = 7,364 units

Total population within 1.5km Radius = 29,456 residents

Ongoing & Future Development

According to the latest Malaysia transport masterplan, Banting is located at the center point of WCE Expressway that link from Penang Port to Tanjung Pelepas Port. Then, ECRL connects the east coast of Malaysia to Klang Port that bring more business opportunity to Banting and increase the economy of Banting.

Banting population will increase rapidly in the future. Residential and commercial development are already under planning.

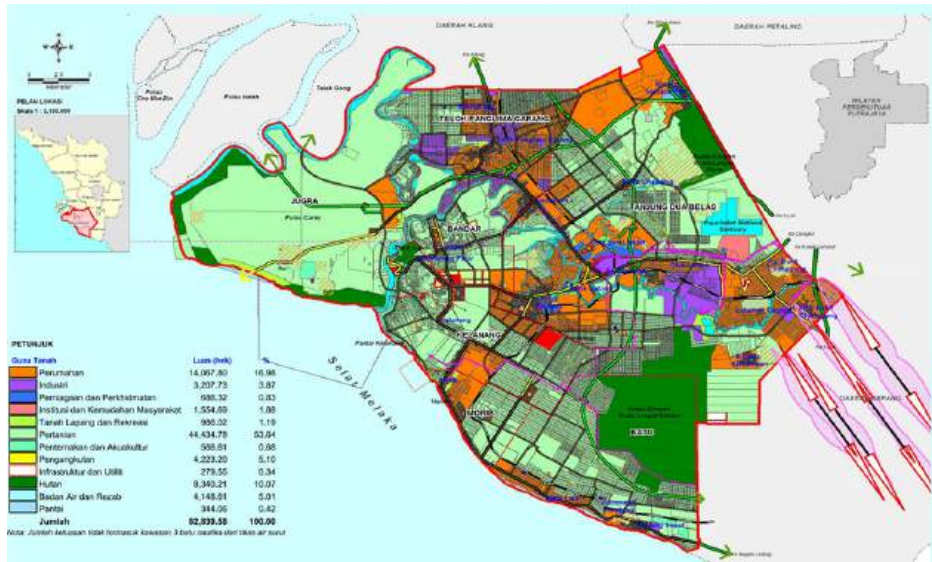


Ongoing & Future Development



General Information

Socio-Economic - Macro Economic Analysis



Banting is a town located in Kuala Langat, Selangor. It is a traditional agricultural area, with local industry dominated by palm oil plantations, poultry farms, and other agricultural trades. Besides agriculture lands, there are also industrial and residential areas as well as natural beaches and hills.

Kuala Langat Economic Sector



Industrial Sector

High potential industrial clusters that are acting as growth engine for economy.

- Iron and Steel Industry
- Timber Industry
- Palm Oil Industry
- Shipment Industry



Agricultural Sector

High agriculture production value of various crops. For example, palm oil, vegetable fields, poultry farms and cash crop planting.

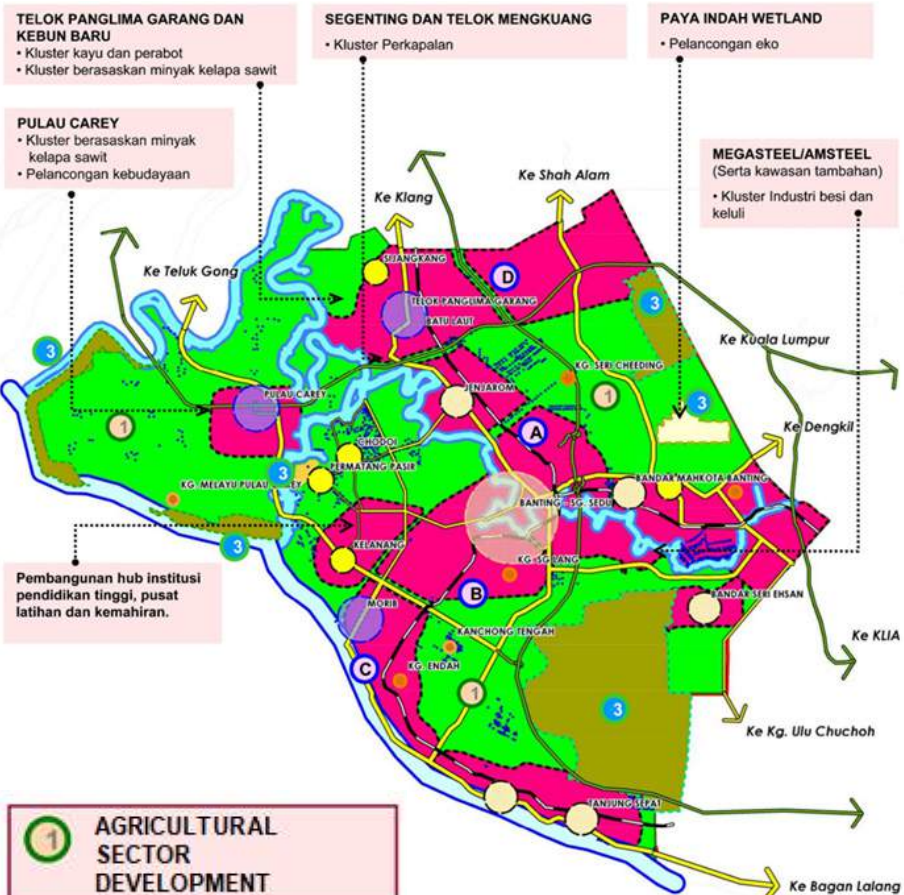


Tourism Sector

Popular sector in Kuala Langat

- Sports and recreational
- Cultural and historical
- Tourism

Economic Growth Strategy

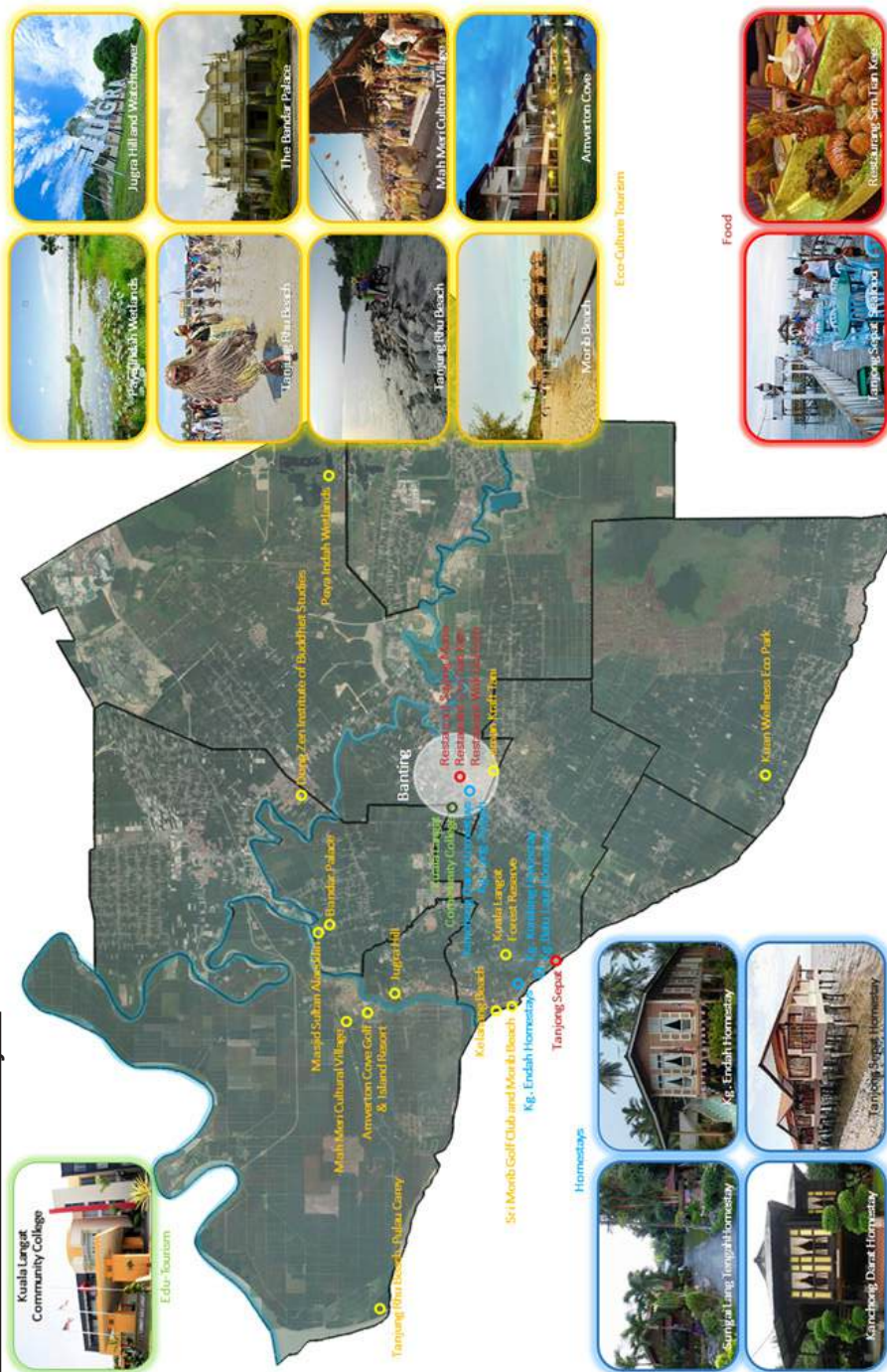


**1 AGRICULTURAL
SECTOR
DEVELOPMENT**

2. DEVELOPMENT AREA

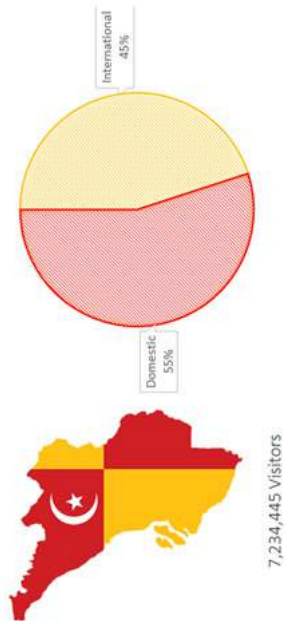
- A** Jaringan Sijangkang – Telok Panglima Garang – Banting
- B** Jaringan Banting – Telok Panglima Garang – Sg. Manggis – Olak Lempit – Bukit Changgang
- C** Jaringan Banting – Morib – Tanjung Sepat
- D** Jaringan Pulau Carey – Telok Panglima Garang – Saujana Putra

Tourism Economic Analysis



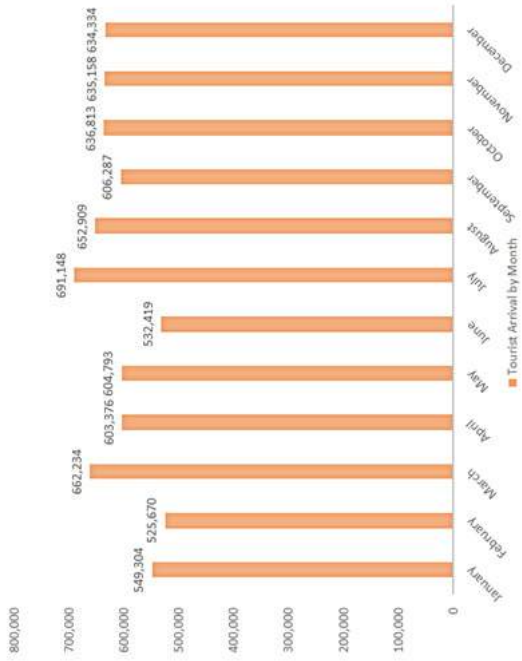
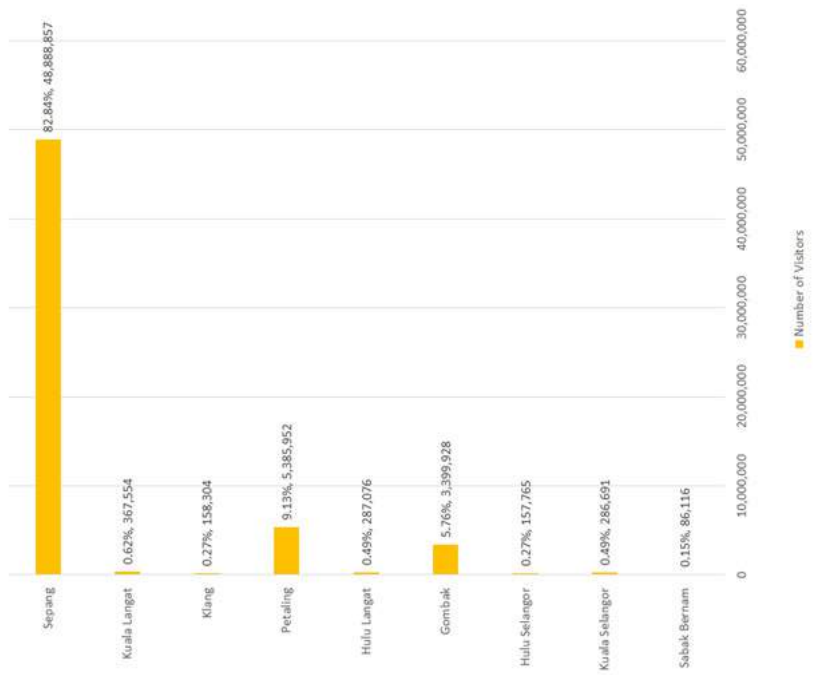
Tourism Economic Analysis

Total Number of Tourist Visit to Selangor in 2018



7,234,445 Visitors

Number of Visitors to famous spots within Selangor by Districts in 2013.



Employment Opportunity

Homestay & Hotel



Education Hub



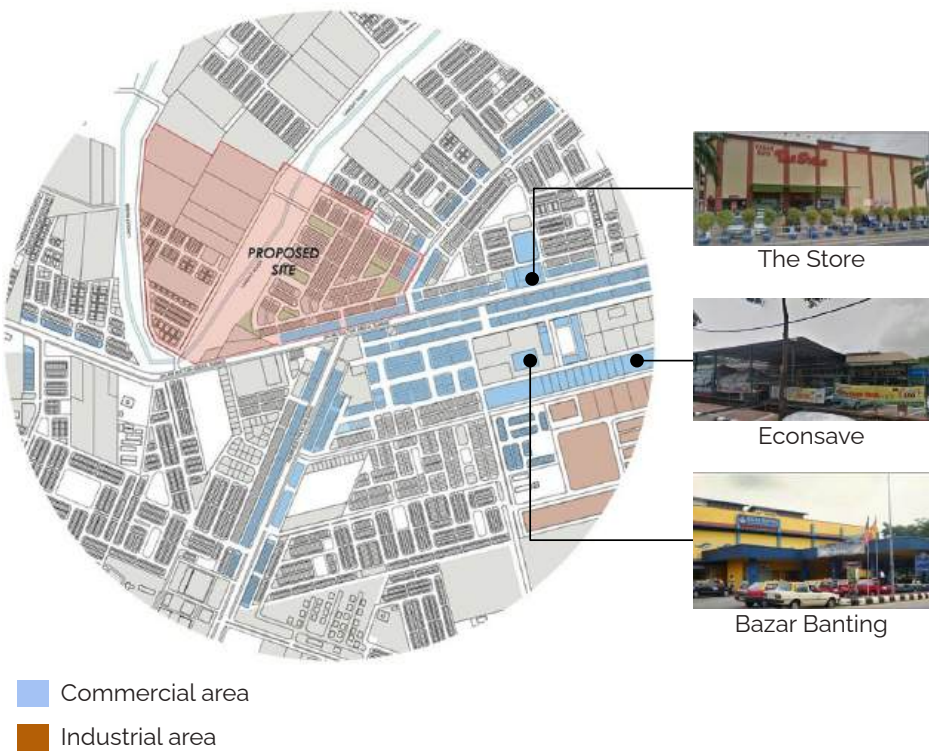
Commercial Complex



Business Centre

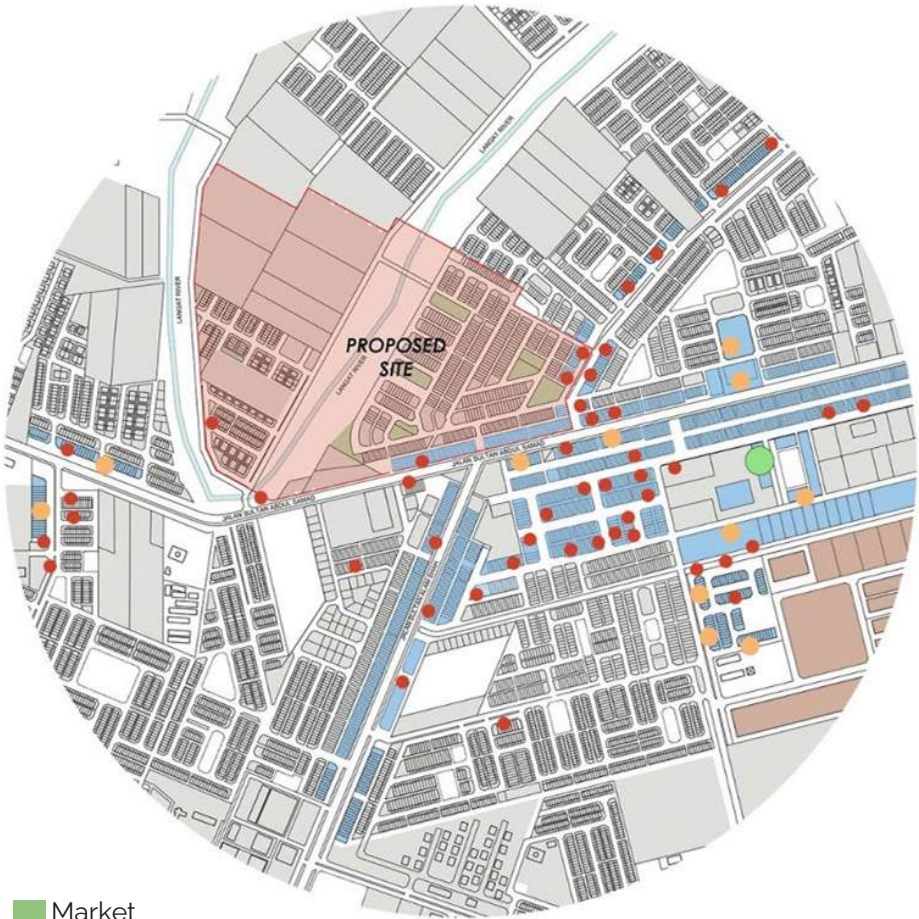


Key Retail Outlet



Retail outlets in the area are limited, but growing. As a result it lacks the major malls one might find in more substantial urban areas. Bazar Banting and Uptown Banting form a central local shopping hub while Eonsave is a more central supermarket alternative, providing price-focused supermarket goods in a convenient location, with a number of shops and stalls catering for local residents and so are Banting wet market and day market.

Retail



- Market
- Commercial area
- Industrial area
- Food & Beverage
- Convenient store

Retail



Shop Lots along the road



Morning wet market



Uptown Banting



Restaurant & cafe



Food stall around the city



Premier oil industry



Warehouse

Self Sustain Economic Culture

Studied from the questionnaire distributed, most of the respondent's household economic status are on the status of B40 which is below rm 4,849. Majority of local work in private sectors including setting up own stall to sell foods and clothes and run traditional or family business around the town.

According to the survey, terrace house are found to be most of the number around neighbourhood in Banting. Moreover, the chart showed that the length of stay are more than 20 years and almost 80.9% have bought the house while the other 19.1% are renting.



Morning market



Food stalls along the road



Bazaar area



Banting Neighbourhood



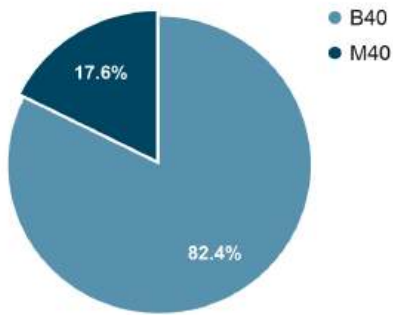
Traditional business



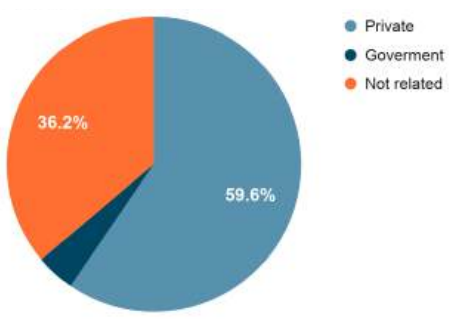
Family Business

Demographic

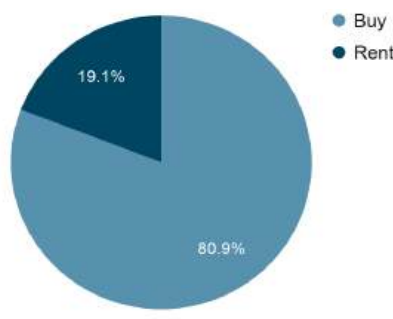
Household Income



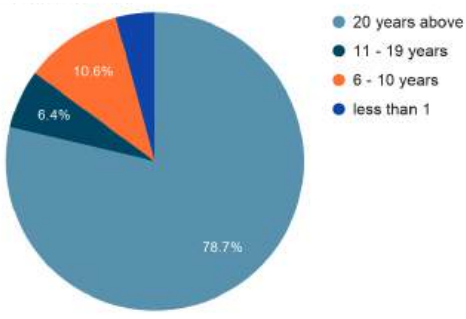
Working Sector Involved



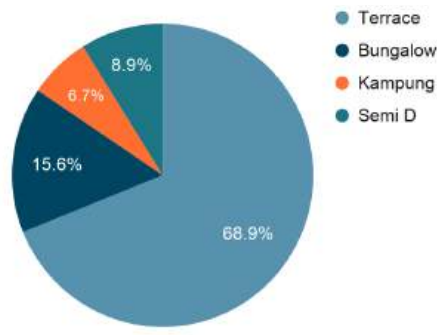
House Ownership



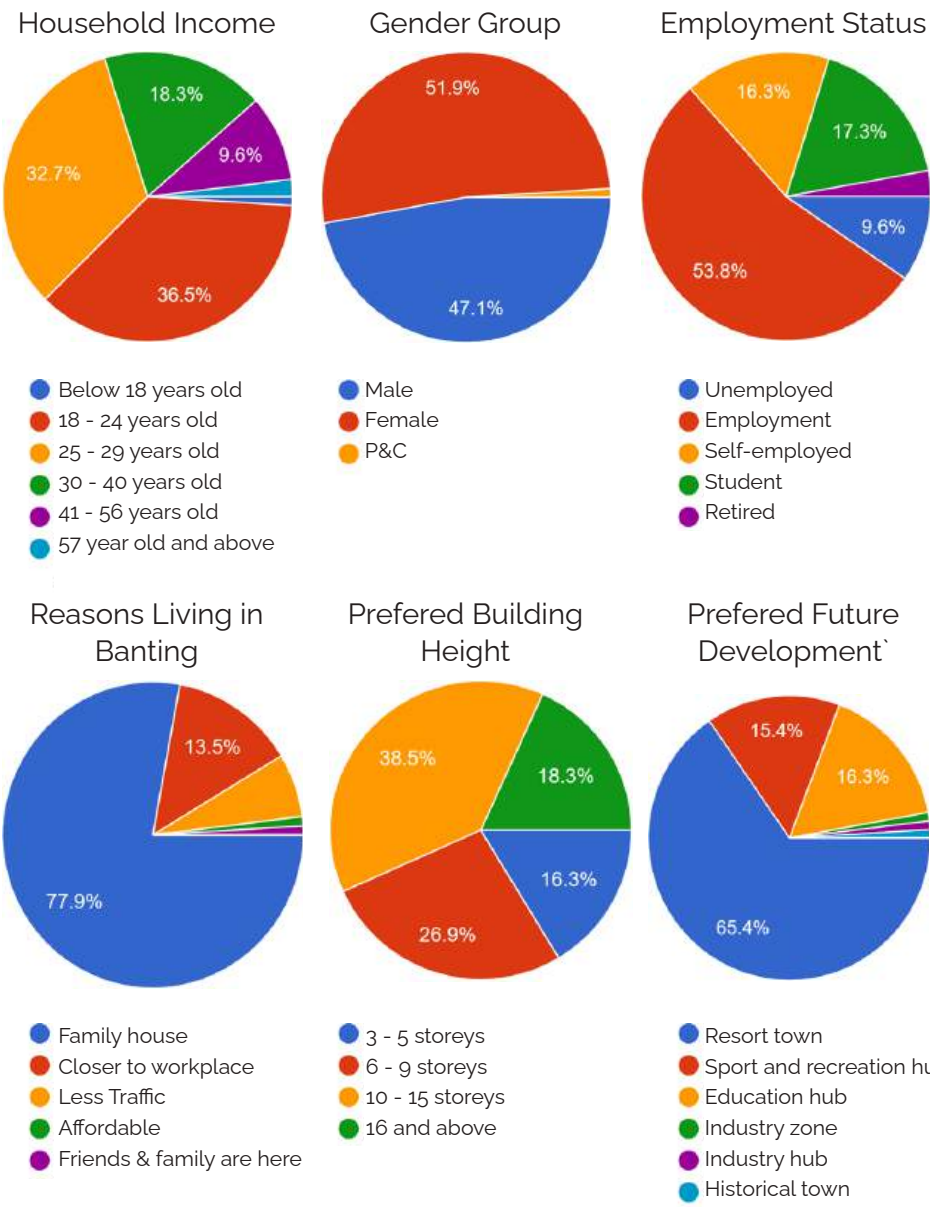
Length of Stay



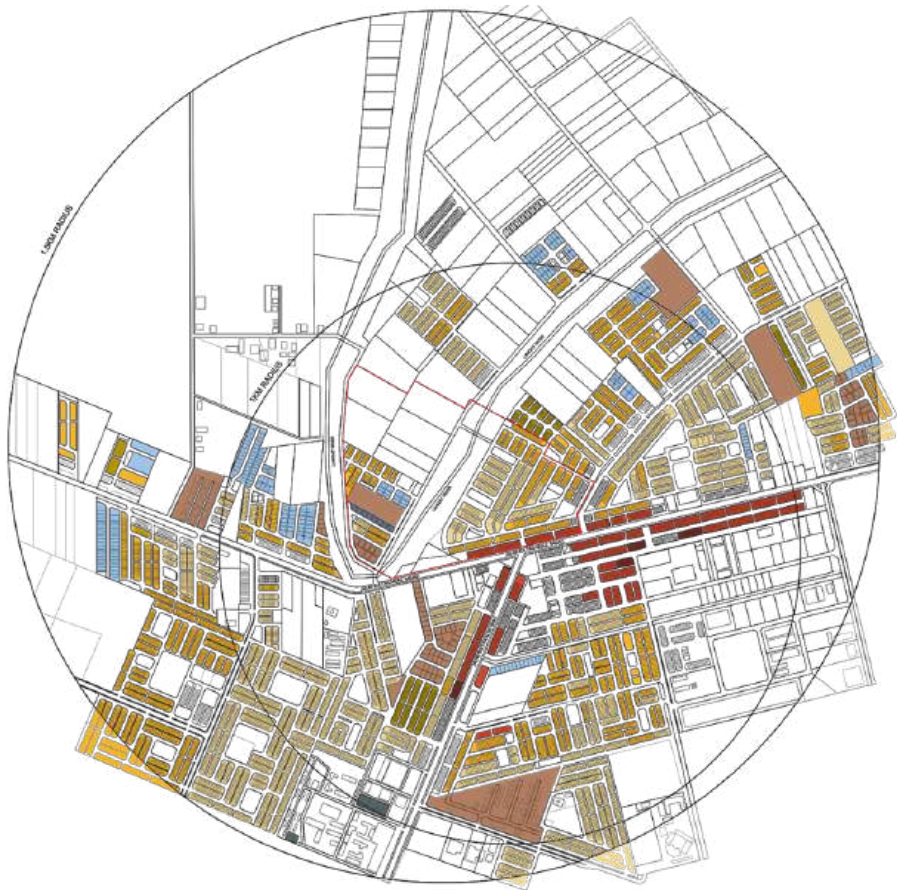
Housing Typologies



Demography



Housing Typology Studies



TABULATION :

LEGEND	ESTM. UNITS
1 STOREY TERRACE HOUSES	2937
2 STOREY TERRACE HOUSES	2459
2½ STOREY TERRACE HOUSES	196
2 STOREY SEMI-Ds	278
3 STOREY SEMI-Ds	8
1 STOREY BUNGALOWS	124
2 STOREY BUNGALOWS	41
2 STOREY SHOP HOUSES	445
3 STOREY SHOP HOUSES	78
APARTMENTS	160
TOTAL	6726

Banting mostly comprises of terrace houses. According to Selangor government, the government is still urgently looking into building low-cost residential properties in Banting, as none has been constructed in the past 30 years.

Many people in the B40 group are renting sub-standard houses.They need to be given a chance to own a home and there is abundant state-owned vacant land for the purpose.

This will encourage more people to live in Banting and contribute to its increasing industrial and commercial development.

KAMPUNG PULAU BANTING
Semi Detached
1800 sq ft
RM 720,000

TAMAN MUHBAH
Terrace House
800 sq ft
RM 320,000

TAMAN DELIMA
Terrace House
900 sq ft
RM 400,000

TAMAN GEMBIRA
Terrace House
1500 sq ft
RM 600,000

TAMAN SRI PUTRA
Terrace House
1200 sq ft
RM 500,000

TAMAN BUDIMAN
Terrace House
1500 sq ft
RM 620,000

Proposed Site

Overall Housing Characteristic

- Landed Property
- 800 sq ft to 1800 sq ft
- Minimum Open Space
- 20 units / acre
- Housing Price @ RM400 / sq ft

Budget Estimation for Purchasing Housing Properties

Single / Household Annual Income (RM)	Maximum Loan (RM)	Monthly Payment (RM)	Estimated 10% Deposit (RM)	Housing Price (RM)
17,500	86,500	383	9,611	96,111
25,000	142,962	633	15,884	158,846
30,000	180,679	800	20,075	200,754
35,000	218,395	967	24,261	242,661
40,000	255,886	1,133	28,431	284,317
50,000	331,320	1,467	36,813	368,133
100,000	707,583	3,133	78,620	786,203

B40

B40

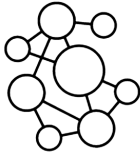
Public Amenities

- Police Station : 1 nos
- Gov. Hospital & Clinic : 2 nos
- Fire Station : 1nos
- Primary School : 4 nos
- Secondary School : 4 nos
- Vocational School : 1 nos
- Mosque & Surau : 7 nos
- Buddhist Temple : 5 nos
- Hindu Temple : 4 nos
- Church : 6 nos

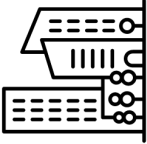
Open Space

: 176,808 sq m

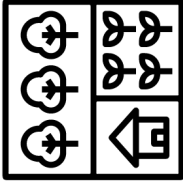
Concept Statement



Neighbourhood is well connected to provide public facilities and amenities



Provide for Housing Opportunity and Choice



Mix land use
Neighbourhood

Banting Housing Development

New Development



Selling Price	: RM 324,000
Property Type	: 1-sty Terrace
Land Title	: Residential
Property Title Type	: Individual
Tenure	: Leasehold
Built-up Size	: 800 sq. ft.
Built-up Dimension	: 40' x 20'
Land Area Size	: 1,300 sq. ft.
Land Area Dimension	: 65' x 20'
Unit Type	: Intermediate
Storey	: 1



Selling Price	: RM 720,000
Property Type	: 2-sty Terrace
Land Title	: Residential
Property Title Type	: Individual
Tenure	: Leasehold
Built-up Size	: 1,600 sq. ft.
Built-up Dimension	: 40' x 20'
Land Area Size	: 1,200 sq. ft.
Land Area Dimension	: 60' x 20'
Unit Type	: Intermediate
Storey	: 2

Existing Development

Selling Price	: RM 280,000
Property Type	: 1-sty Terrace
Land Title	: Residential
Property Title Type	: Individual
Tenure	: Freehold
Built-up Size	: 1,000 sq. ft.
Built-up Dimension	: 50' x 20'
Land Area Size	: 1,400 sq. ft.
Land Area Dimension	: 20' x 70'
Unit Type	: Intermediate
Storey	: 1



Selling Price	: RM 610,000
Property Type	: 2-sty Terrace
Land Title	: Residential
Property Title Type	: Individual
Tenure	: Leasehold
Built-up Size	: 1,570 sq. ft.
Built-up Dimension	: 50' x 20'
Land Area Size	: 1,400 sq. ft.
Land Area Dimension	: 20' x 70'
Unit Type	: Intermediate
Storey	: 2



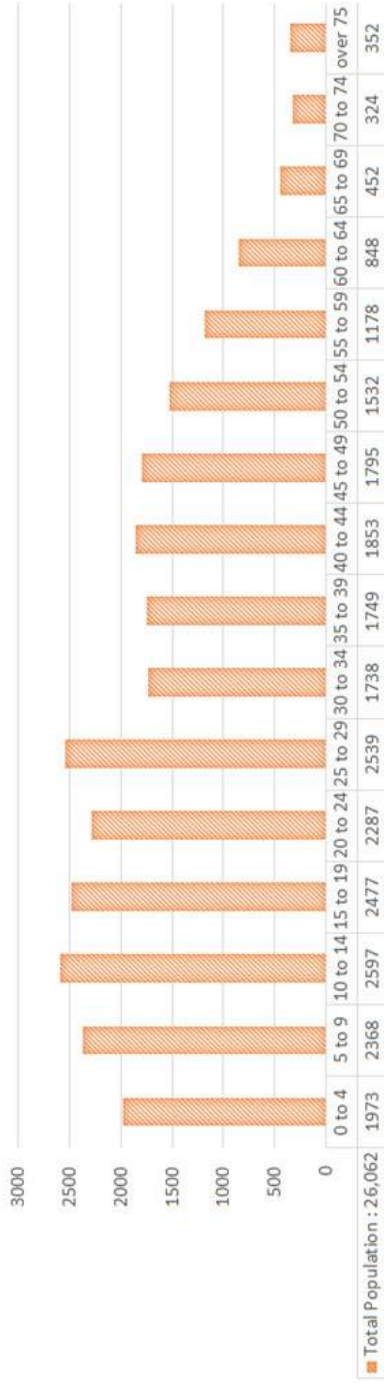
Socio-Culture

Sporty & Healthy Community Culture



Studied from the questionnaire distributed, large number of residence in Banting shares the cultures of exercising together. Exercising happen on common spaces within neighbourhood or bigger public common space in Dataran Banting. Banting itself is famous with the culture of badminton, influenced by the famous sidek brothers who was former national badminton player and coach. Hari Sukan Negara are held anually near Banting to celebrate the sporty culture of Banting

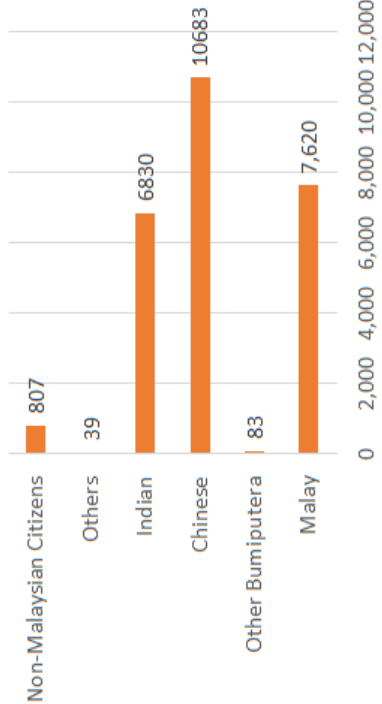
Population by Age Group



Population by Gender



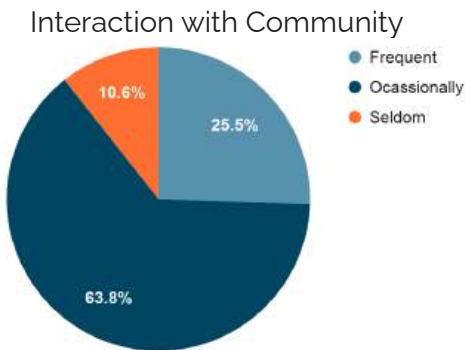
Population by Ethnic Group



Healthy Interaction With Communities Around Neighbourhood



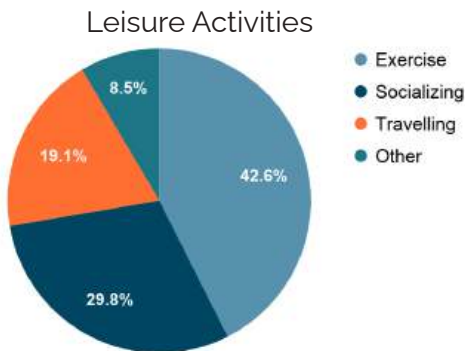
Common space within neighbourhood



Sport & Exercise Oriented Culture



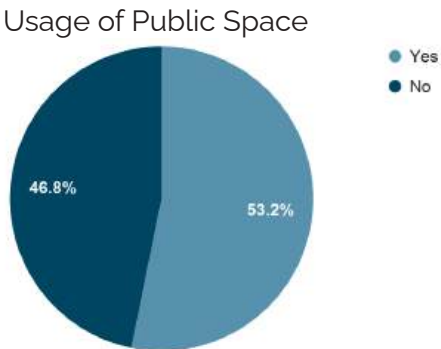
Hari Sukan Negara
Badminton tournament



Recreation Activities Held in Common Space



Dataran Banting



Human Activities (Weekday)



Day time activities

1. SMK Bandar Banting
2. SK Banting
3. Hospital Banting
4. Perpustakaan
5. IPD Kuala Langat
6. Dataran Banting
7. SJK(C) Choong Hua
8. SK Sri Langat
9. Commercial Shoplot
10. Pasar Awam Banting
11. Bazar Banting

Night time activities

9. Commercial shoplot
12. Masjid At-Taqwa
13. My Cinema
14. Food Stall
15. Uptown Banting
16. The Store
17. Econsave

Human Activities (Weekend)



Day time activities

- 3. Hospital Banting
- 5. IPD Kuala Langat
- 6. Dataran Banting
- 9. Commercial Shoplot
- 10. Pasar Awam Banting
- 11. Bazar Banting
- 13. My Cinema
- 16. The Store
- 17. Econsave

Night time activities

- 9. Commercial shoplot
- 12. Masjid At-Taqwa
- 13. My Cinema
- 14. Food Stall
- 15. Uptown Banting
- 16. The Store
- 17. Econsave

Tangible Culture - Architecture



A old Recreational park that located Center of Banting providing public recreation space to nearby neighbourhood



Masjid Sultan Alaeddin. Also known as 'Masjid Bandar'.
Located within the historical town in Jugra, Banting



Colonial Shophouses building style in Banting Town

Tangible Culture - Community events



Pasar Awam Banting



Uptown Banting



Short Getaway to Morib



Morib RetroMania Exhibition



Pantai Kelanang (Camp Site)



'Merewang' Activities
During Wedding



Badminton Sport



Hari Sukan Negara Event

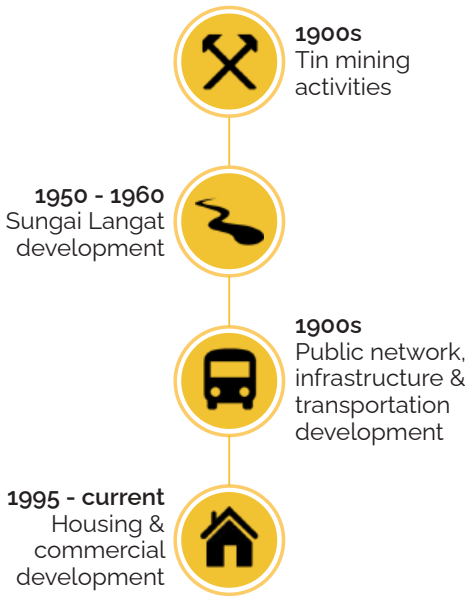
TOWS Matrix

<h1>TOWS MATRIX</h1>	<p><u>STRENGTH (S)</u></p> <ul style="list-style-type: none"> • Strategic location, it is connected to multiple highways connecting to major district cities. • Rich cultural and historical values. • The distribution of the town blocks creates open spaces. • Good neighborhoods create comfortable living spaces. • Human-scale buildings increase wind velocity. 	<p><u>WEAKNESSES (W)</u></p> <ul style="list-style-type: none"> • Unfriendly and discontinuity pedestrian pathway • Lack of public transportation • Lack of urban streetscape in the urban fabric • Poor stormwater drainage system • Surrounded by human scale building (below 4 storey height)
<p><u>OPPORTUNITIES (O)</u></p> <ul style="list-style-type: none"> • Surrounded by active nodes • Vertical urban expansion • Introduce variety of activities • Increase town economy 	<p><u>S-O STRATEGIES</u></p> <ul style="list-style-type: none"> • Slow down cars movements by minimising roads width by introducing bikes lanes and pedestrians pathways. • Introduce public activities around the nodes. • Promote new landmarks in the town. 	<p><u>W-O STRATEGIES</u></p> <ul style="list-style-type: none"> • To connect streetscape to the active nodes • Provide more alternative public transportation • Implement universal design in street's pedestrian pathway
<p><u>THREATS (T)</u></p> <ul style="list-style-type: none"> • Flooding in urban areas: monthly average rainfall varies with notable seasonality • Heatwaves: due to lack of greeneries and open agriculture burning activities • Haze: due to open agriculture burning activities 	<p><u>S-T STRATEGIES</u></p> <ul style="list-style-type: none"> • Enhance the riverside to create social and communication areas. • People will use public transports and bikes rather than use their own cars to reduce the haze. 	<p><u>W-T STRATEGIES</u></p> <ul style="list-style-type: none"> • Providing greenery streetscape to minimise the heatwave and haze in the town. • To widening the drainage system

Dengkil

Introduction

Historical Background



Dengkil is located in Sepang District, Selangor, Malaysia and was formed by several villages and spreads across 5,310 acres. The origin name of “Dingkil” came from a durian trees living on the banks of the Sungai Langat that often bear fruits. Dengkil economic growth developed from tin mining activities, oil palm plantations, agriculture in the estate area and manufacturing industrial areas. Dengkil has become living central township connects between Putrajaya, Cyberjaya and KLIA.



Tin Mining Activity



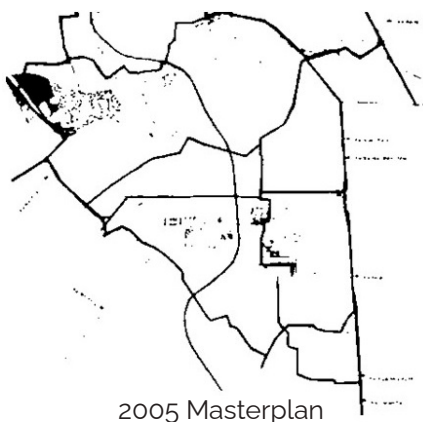
Sungai Langat in 1950s



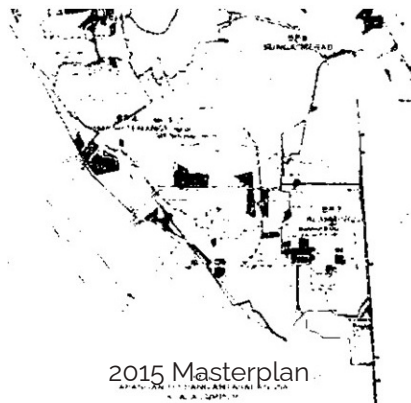
Infrastructure Development



Land Development



2005 Masterplan



2015 Masterplan



2020 Masterplan

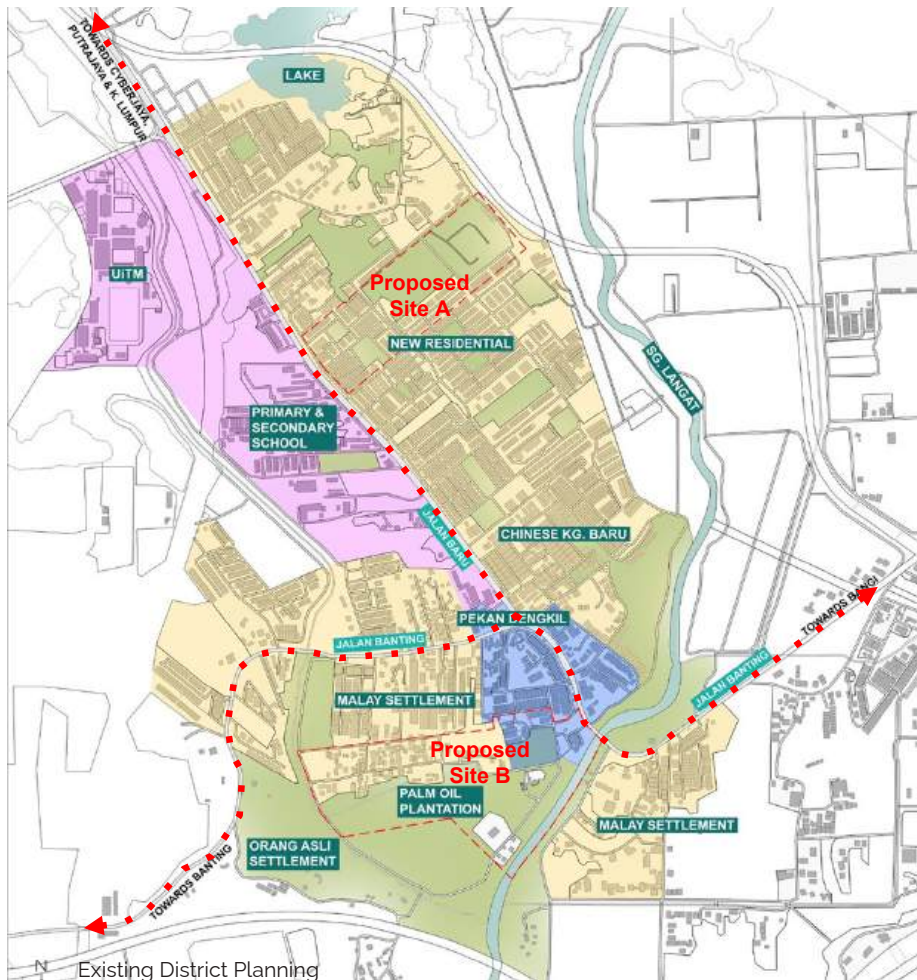
Urban Morphology

The local government had developed public facilities during the 1990s to 2005 to upgrade the infrastructure connections. The public facilities that were developed includes schools, post office, police station, bus facilities and healthcare facility. In 2015 MPS Strategy plan, the local government aimed to accommodate the growing Dengkil population, in which many agriculture land has been converted to residential land title. This also attracted several new developments coming up surrounding Pekan Dengkil such as SimeDarby Property Sdn. Bhd., Sunsuria Group, KIP Group, IOI Properties Group and Glomac Bhd.

Currently the residential developments are more than 50%, in which 20% is commercial developments as reported by Majlis Perbandaran Sepang. Pekan Dengkil has well developed infrastructure and connected to several townships & city centre between Putrajaya, Cyberjaya and KLIA via Elite Highway, Putrajaya Link and Dengkil By-Pass Road. The strategic location of Pekan Dengkil has emerged as the living central township in Mukim Dengkil.

General Information

Overall Masterplan



Existing District Planning



Commercial

Institution

Residential

Community

- New residential
- Chinese Kg. Baru
- Malay Settlement
- Orang Asli Settlement

Connections

- Main road: Jalan Banting & Jalan Baru
- Secondary road: residential / commercial streets
- Public bus transportation

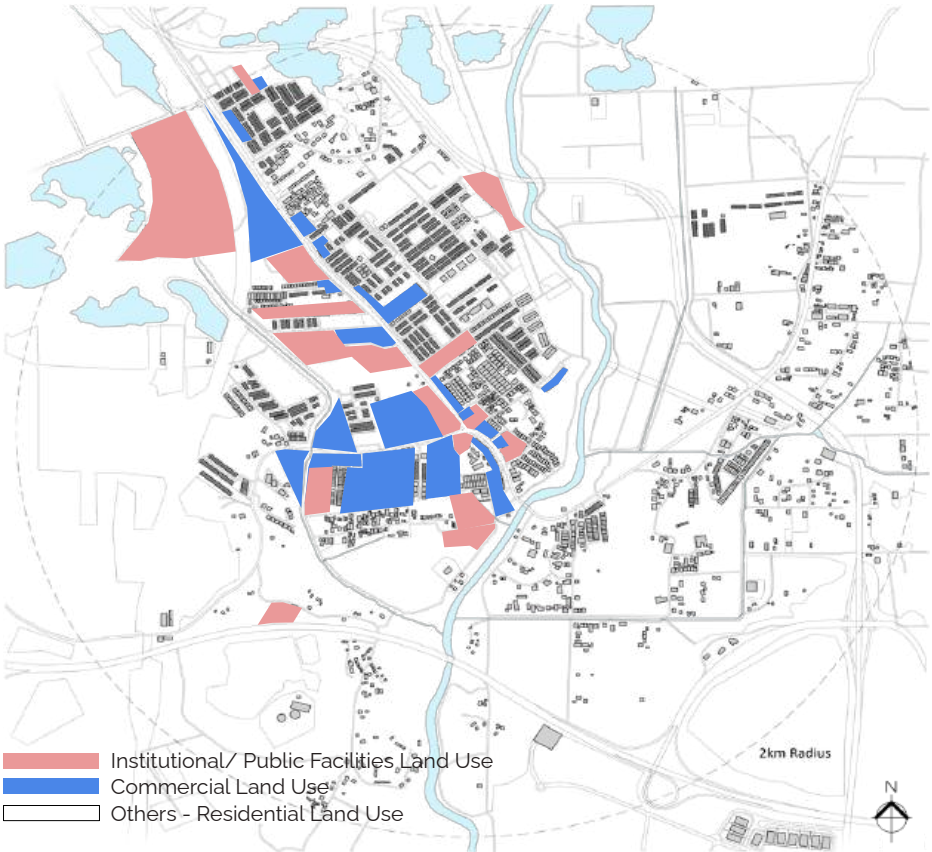
Natural Elements

- Palm oil plantation
- Langat River
- Voids around are green area
- Green spaces within residential district

Robustness

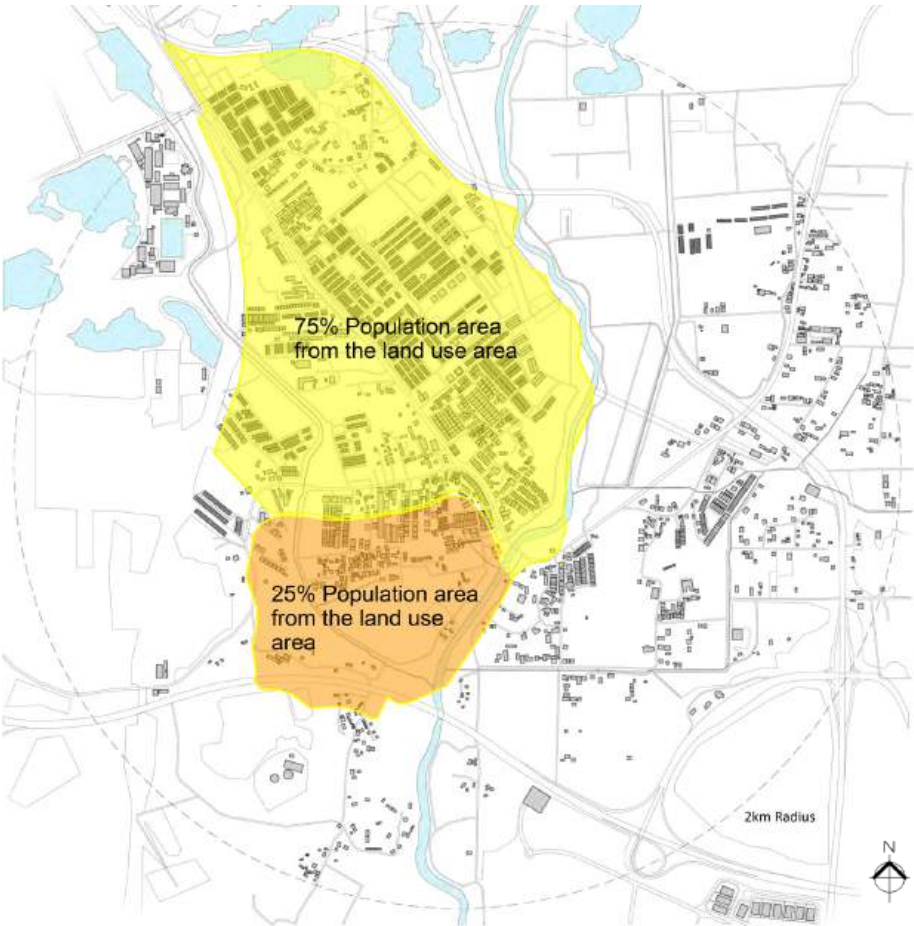
- Urban development is concentrated at the middle of Dengkil

Zoning Masterplan



Dengkil consists of mostly residential zones. Commercial zones mostly span along the main road of Jalan Bahru which serve as the main artery of Dengkil. Moreover, Dengkil also consists of institutional zones which host primary, secondary and tertiary educational institution within the town itself

Demography

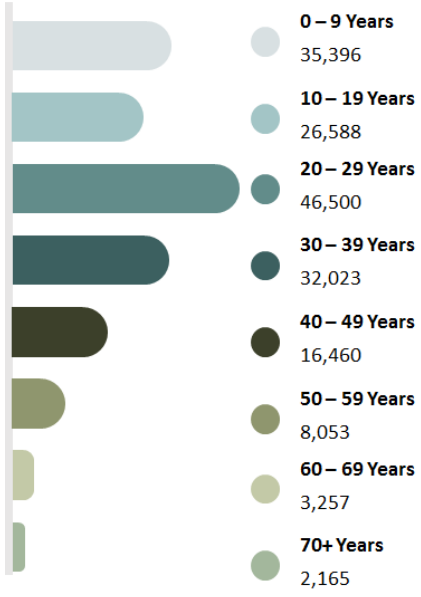
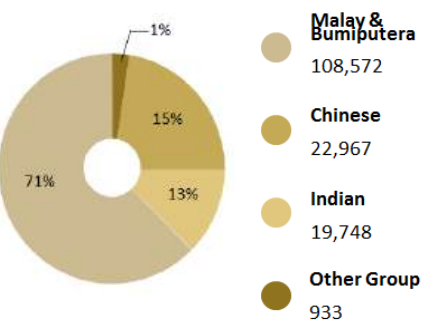
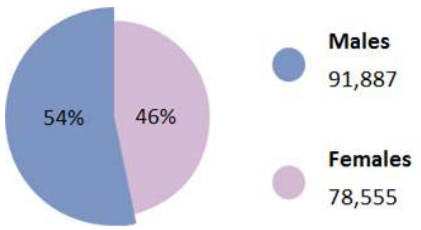


Demography

Dengkil is experiencing population boom for the last ten years. Population numbers increased, more than 100,000 from year 2000. Dengkil total population is 170,442 as presented after year 2010. It coincided with the declaration of Putrajaya as Federal Territory, where the population increased from 30,000 to 80,000

Young Adults consists of the largest age group in Dengkil, taking up 27.3% of the group. The working class takes up 59.1% of the group, indicating a healthy and capable local area economy. Youngest age group represents the second largest group at 21%, indicating healthy birth rate and population growth.

Majority of the residents are of the B40 and M40 income group. Mostly working an 9-5 job in neighbouring city like Cyberjaya and Putrajaya while staying in Dengkil.



Natural Features



Natural Features



Open Field



Langat River



Open Land Used for Bus Parking



Neighborhood Farming



Plantation Field at Site A



Plantation Along Road



Vacant Land with Shrubs

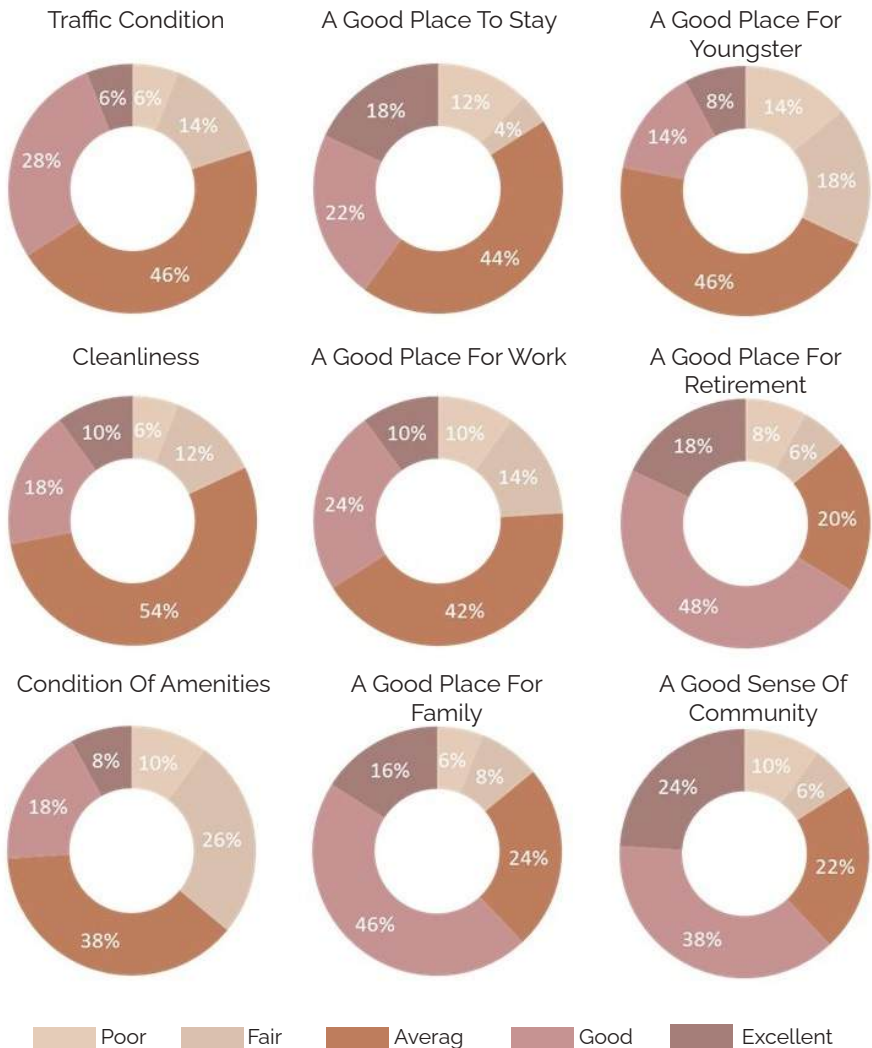


Plantation Field at Site B Entrance



Banana Tree Field

Statistic Survey



Generally Dengkil is an favourable residential town.. Younger generation find the town slightly dull in entertainment but it is a decent education hub. Moreover, Dengkil residence have a strong sense of community which evoke sense of belonging within the locals. However the locals wants upgrades in public amenities such as leisure park, or hang out area within Dengkil.

Socio - Economic

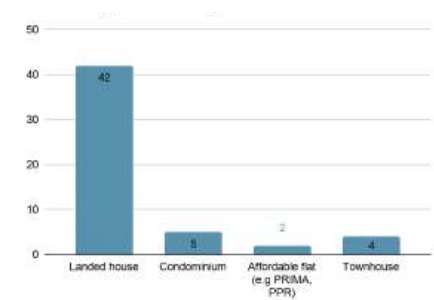
Local Employment



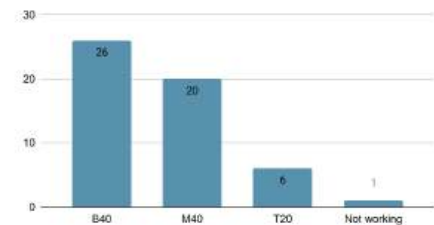
- Used to be a flourishing area for tin mining, palm oil plantation and rubber plantation.
- Drop in demand for tin and rubber and industries slowed down.
- People moved out from Dengkil in search for better opportunity and leaving behind mining pools and abandoned dredging machine.
- Currently, due to the rapid development of city nearby like Cyberjaya and Putrajaya, Dengkil has benefitted in their economy.
- Dengkil is famous for their food.
- Popular stop for breakfast and lunch for people working at nearby places
- Homestay start to grow up.
- Quick browse for traveler before their flights.

Survey Analysis

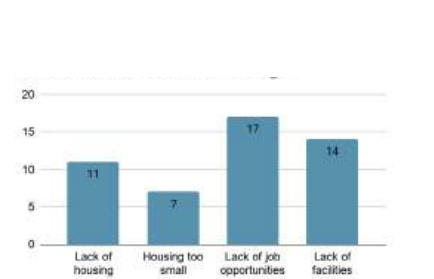
Preferred Type of Housing



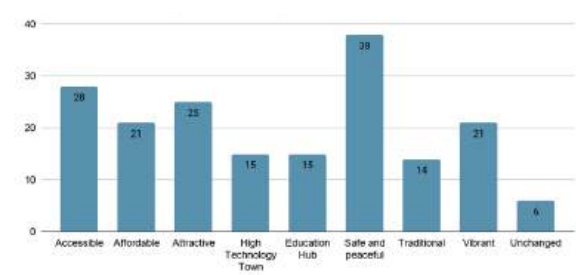
Household Income



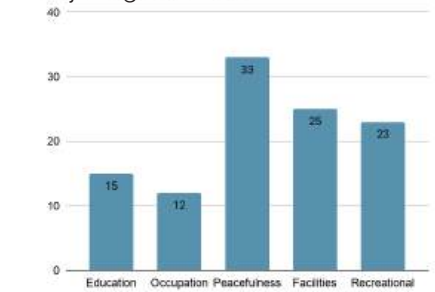
Reason to Move Out



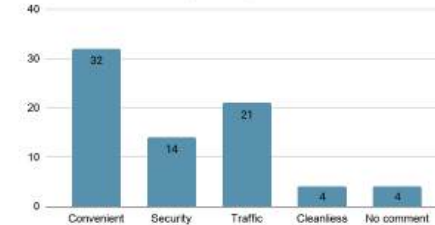
Improvement in next 15 Years



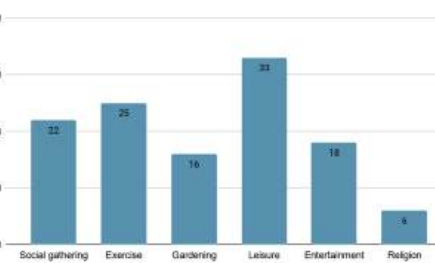
Priority Neighbourhood



Satisfaction of Living Environment



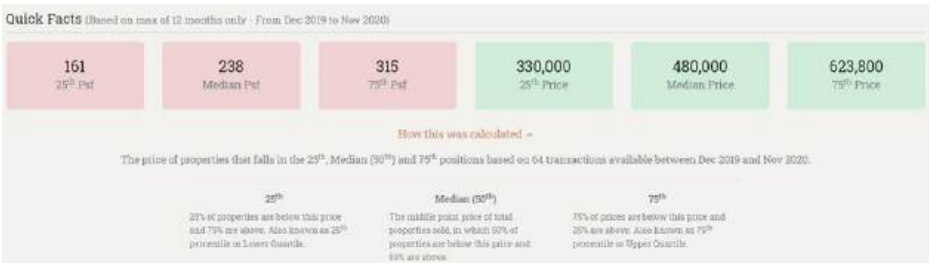
Importance Activities



Based on the Survey conducted in Facebook Dengkil Community Groups. 53 respondents (28 female 25 male)

Surrounding Land & Property Price

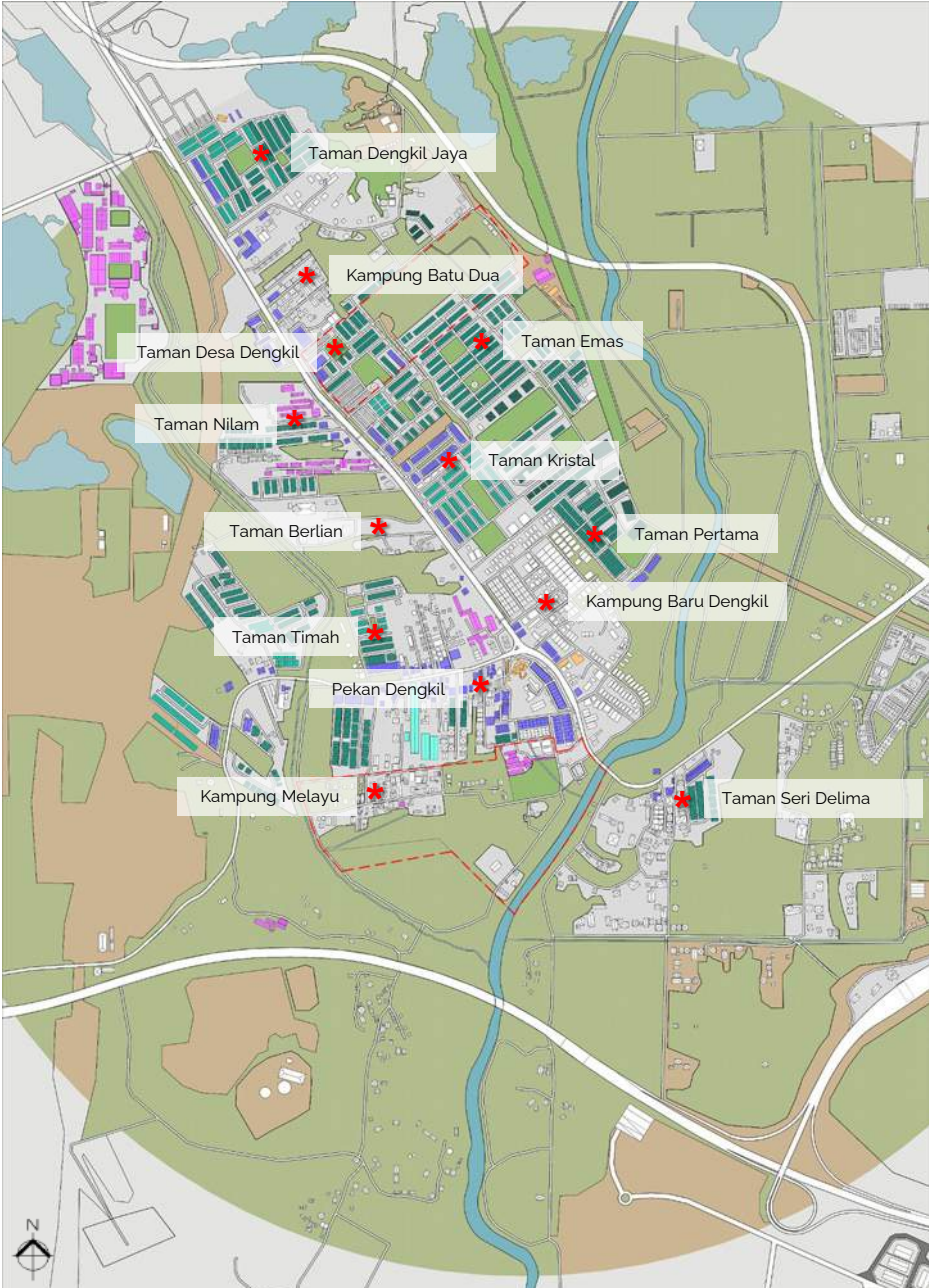
Landed Housing



High-Rise Housing



Building Typology Study



Building Typology Study

Single Storey Housing



Early Stage



Post Modern

Double Storey Housing



Early Stage



Condominium & Flat (5 - 10 Storey)









Early Stage



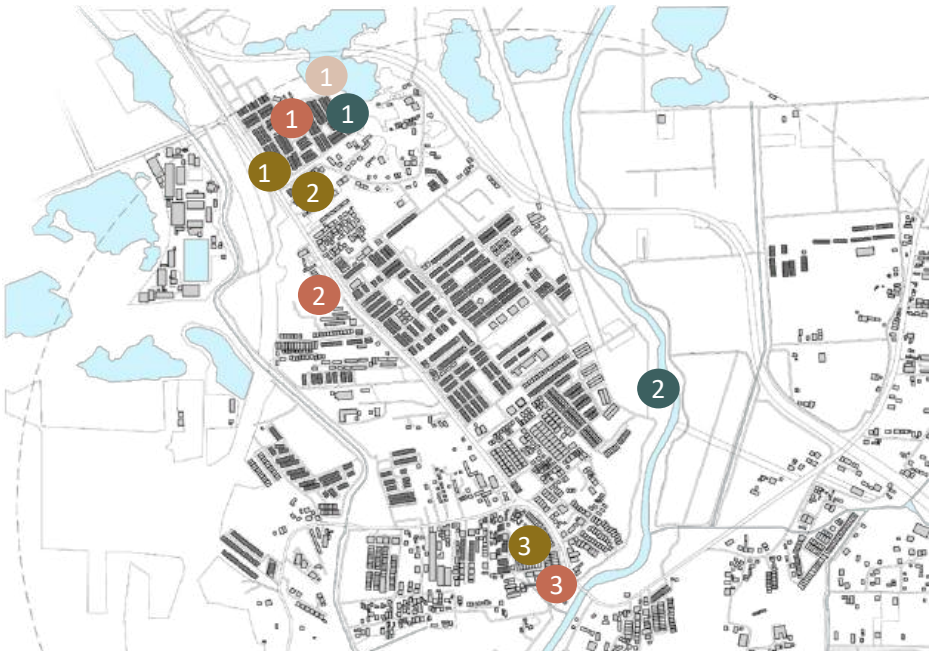
- for B40 & M40 household income group
- Mostly the new housing development is single + double storey housing
- Within Department of Civil Aviation(DCA) approach high limit

Building Typology Study

	Type	
Early Period		
	Malay Settlement Residential	Chinese Settlement Residential
Post Independence Period		
	Single Storey Residential	Double Storey Residential
Contemporary		
	Double Storey Residential	Double Storey Residential

	Characteristic	Observation
	<ul style="list-style-type: none"> • Timber material • Louver window • Roof with zinc material • Gable roof • Vernacular elements • Simple and affordable • Low density 	<ul style="list-style-type: none"> • Maintaining its original facade and elements to give the sense of character and ambience of its surrounding area. • Early form of neighbourhood and community. • Each houses are of same characteristics, however with different appearances.
	<ul style="list-style-type: none"> • Simplified design elements • Reinforced concrete • Terracotta roof tiles • Modernised design • Medium density 	<ul style="list-style-type: none"> • The expansion of housing to form a new neighbourhood in the town when housing provision on economy of scale required, • e.g.: Taman Timah • The housing neighbourhood are built in more organised planning with terrace houses typology. • The houses are of original design with modernism influences
	<ul style="list-style-type: none"> • Geometric and repetitive form • Elimination of adornment • Glass openings • Monochromatic colors of building facade • Medium density 	<ul style="list-style-type: none"> • The houses are with little or no adornment. • Lack of unique characteristics and were continuously diluted by mass development. • Emphasise on the maximum utilisation of land and functionalism of spaces

Social Activities



Fishing Activities



- 1 Taman Dengkil Jaya
- 2 Sungai Langat

Night Market & Flea Market



- 1 Pasar Tani, Dengkil Walk
- 2 Pasar Malam, Dengkil Walk
- 3 Pasar Malam, Pekan Dengkil

Food Court & Market



- 1 Pusat Penjaja Tmn Dengkil Jaya
- 2 Medan Selera Dengkil
- 3 Pasar Awam Dengkil

Entertainment Activities



- 1 RC Powerboat, Dengkil Jaya

Building Typology Study

Hari Raya Aidilfitri Celebration



Happened in May 2020 at SK Dengkil, students gathered together to share the happiness.

Chinese New Year Celebration



Happened in Feb 2020 at SJK(c) Dengkil, that opened to all the community in Dengkil to attend.

Deepavali Celebration



Happened in October 2019 at Dewan Orang Ramai Dengkil, opened to public community.

Celebrations

Analysis

- Always welcoming all the races to participate to share the pleasure together.
- Strong community bonding such as chit chat casually at kopitiam or market.
- Outdoor activities may get affected by the climate.
- Current covid-19 pandemic limits the social activities



- A covered space for community.
- More public leisure places for community to interact and maintain current strong community bonding.
- Covered central market, community hall and leisure park.



Communities

Community Activities (Economy Source) Affected by COVID-19

Due to the current pandemic, the government plays an important role in managing the tension between the economics and the health. Most of the community activity and economic activity need to follow the SOP in order to operate and some of the activities/economy may just forced to be closed temporarily due to the government requirements or less demand from the community.

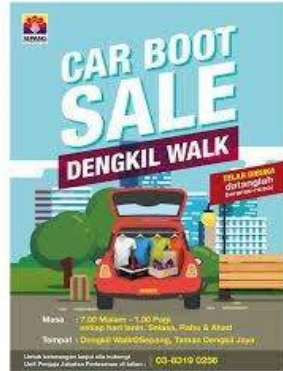
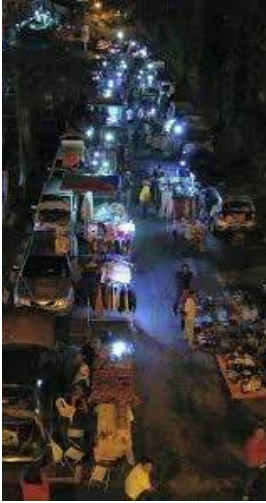


Homestay in Dengkil

The amount of home stay in Dengkil increases due to the high demand from the community. Used to be high rate before Covid-19 because of its low price compared to the one in Cyberjaya and Putrajaya. Whenever there's event happening in Cyberjaya or Putrajaya, the demand is always high. The homestay is always famous among the travelers who want to stay a night and having a short trip at Dengkil before their flight in the next day.

Communities

Retail Activities



Pasar malam Taman Dengkil Jaya temporarily closed. Failed to follow SOP.

Car Boot Sale that used to be held in every Monday, Tuesday, Wednesday and Sunday. The event combined various sale with affordable price.

Temporarily closed due to the pandemic and less demand from the community.

The Intention Of The Society



Food Delivery. Provided by the restaurants.



Home Baking. Also, provided delivery within the neighborhood.



Grocery Delivery.

Some of the groceries shop provided delivery to door step service instead of people going to the market and line-up for hours due to the limitation number of the people to be entered to the market.

TOWS Matrix

<h1>TOWS MATRIX</h1>	<p><u>STRENGTH (S)</u></p> <ul style="list-style-type: none"> • Good accessibility through major highway such as Elite Highway to major districts • Well connected to Jalan Baru, the main street of Pekan Dengkil • Strong sense of community and livelihood • Strong cultural heritage • Natural features of existing river way of Sungai Langat is marked the footprint of early settlement in Pekan Dengkil. 	<p><u>WEAKNESSES (W)</u></p> <ul style="list-style-type: none"> • Unconnected and uncovered pedestrian network • Poor connectivity to public transportation and limited options. • Lack of shady trees and vegetation along the road • Poor neighbourhood infrastructures and facilities including proper road and medical centre. • Lack of entertainment and recreational facilities • Dilapidated neighbourhood.
<p><u>OPPORTUNITIES (O)</u></p> <ul style="list-style-type: none"> • A gateway into Pekan Dengkil that is connected through Dengkil ByPass to neighbouring towns • Upcoming residential townships in close proximity such as Bandar Serenia and CyberSouth • Increase density of the area • Peaceful neighbourhood and comfortable living environment • Fertile soil 	<p><u>S-O STRATEGIES</u></p> <ul style="list-style-type: none"> • Create nodes that signify the site for high visual permeability. • Maintain the unique sense of community. • Promote eco-living neighbourhood • Diversify residential typology to cater different demographic users • An urban rejuvenation phase of Pekan Dengkil for a new image. • Eco tourism activities • Urban farming activities 	<p><u>W-O STRATEGIES</u></p> <ul style="list-style-type: none"> • Create public facilities and recreational areas • Create variety of business trades to boost local economy. • Create self sustaining communities • Encourage sustainable mode of transportation.
<p><u>THREATS (T)</u></p> <ul style="list-style-type: none"> • Narrow roads increase potential accident risk. • Local architecture identity slowly fades away by new and modern development. • Limited working opportunities due to lack of business activities • Flood prone area • Deterioration of river 	<p><u>S-T STRATEGIES</u></p> <ul style="list-style-type: none"> • River rejuvenation that brings the river back to life to potential water front activities • To introduce flood mitigation plan • Strengthen local culture in new developments. • Enhanced the livelihood by including the community in maintaining the neighbourhood. 	<p><u>W-T STRATEGIES</u></p> <ul style="list-style-type: none"> • Create pedestrian path and bike lanes for right of ways upgrades and connects to neighbourhood. • Introduce mixed use and recreational for economic expansion. • Integrate old and new urban planning to improve dilapidated neighbourhood quality.

Urban Rejuvenation Proposal

on

Banting Site A



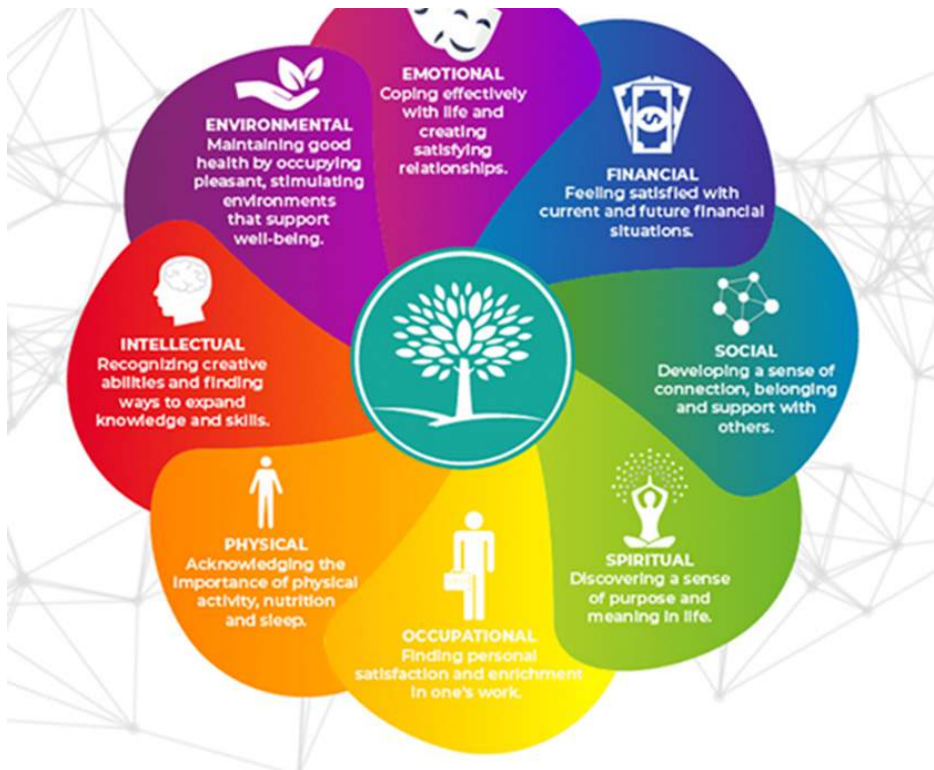
Bant



ting Riveria

Concept

8 Dimensions Of Wellness



- The Practise of 8 dimensions of Wellness offer a forward-thinking map to becoming a flourishing and healthy person.
- In current speed based and competitive society, many will say that modern life didn't really make us happy.
- Most of the people are busy on work or rapid changes due to COVID-19, people lost track on their lifestyle and goals
- The practise of 8 dimension of Wellness will give a chance to wake up, reset and restart our lives, with the hope of a much better way forward.
- Integrating the idea of 8 dimension of wellness into neighbourhood planning, Banting's Riviera will become the neighbourhood that provide an holistic environment creating healthy and flourish community.

Idea Development

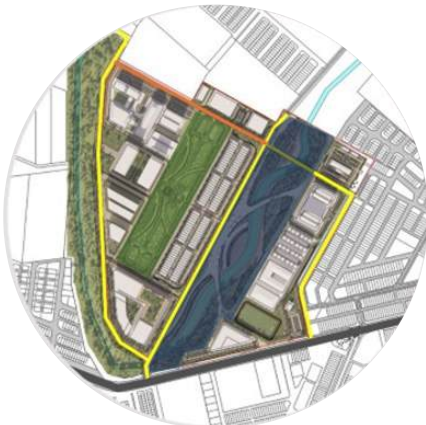
The idea behind the masterplan is to create an urban environment that promotes the idea of a walkable township, while emphasizing on the wellness of the occupants. It also addresses the existing site issues and acknowledges the existing commercial roads.



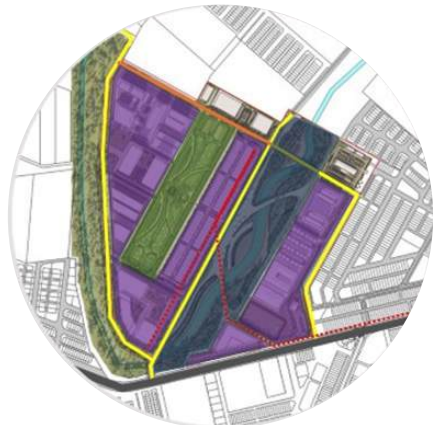
1. Acknowledging and enhancing existing roads (Yellow). Proposal of new road (Orange)



2. Proposal to replace Palm Oil Plantation along River (Blue) with Native Riparian Forests and Landscaping.

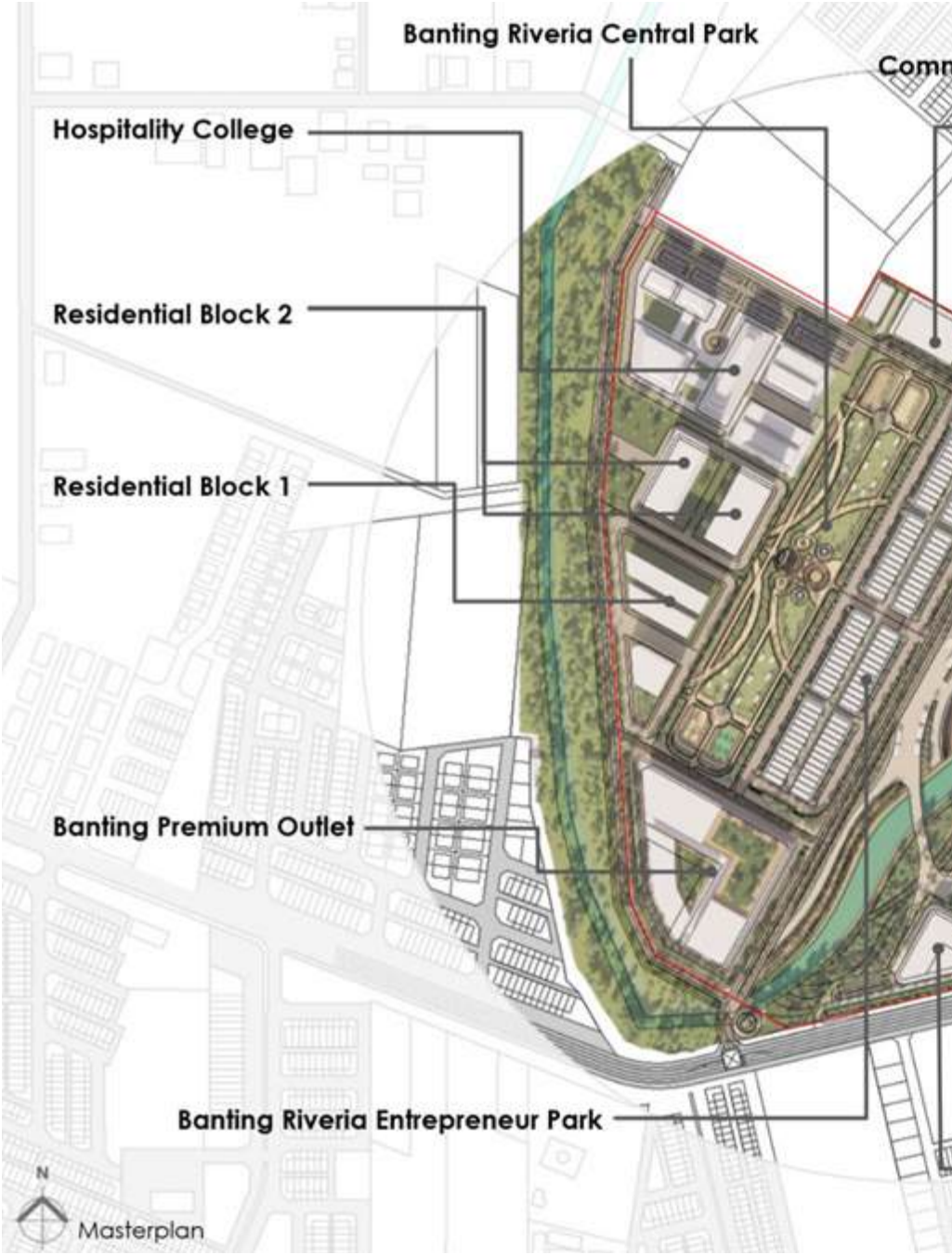


3. Provision of green to allow buffer between developments and promote walkable township.



4. Development Proposal (Purple)
5. Bringing in commercial activities from main roads (Red)

Masterplan - Banting Riviera





Perspectives & Activities



Banting Site B



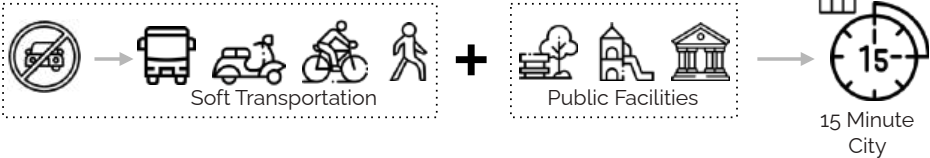
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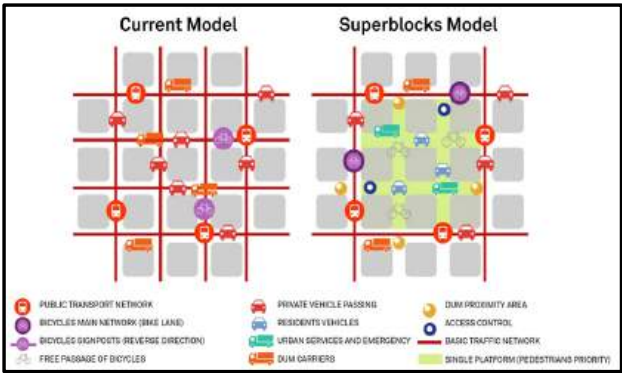
Minute City

Case Studies

Superblock Framework

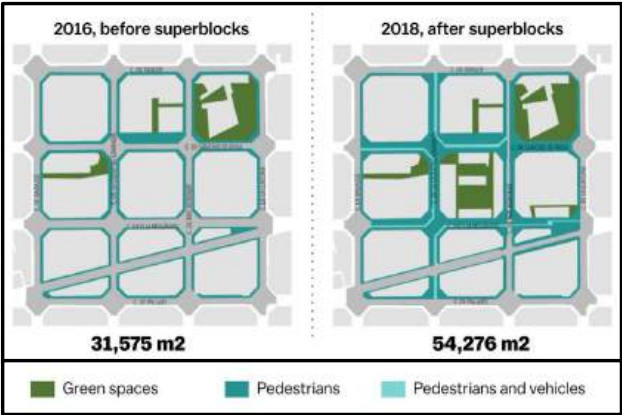


Superblocks Models



Paris
Designed hyper-proximity, myriad neighbourhoods where everything is within a 15-minute walk or cycle from home

Cultivate More Green Spaces In The Community



Milan
Pilot superblock approach as a transition to 'a city of 15-minutes'. Design framework: Essential services are within walking distance, active use of street spaces for local businesses

Concepts



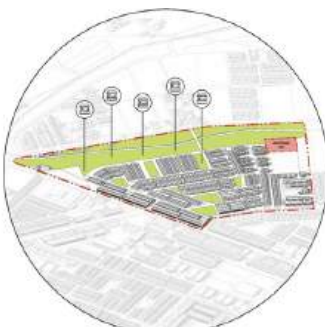
Solid and Void

Regenerate and link all the open space together to foster interaction and promote healthy lifestyle in the neighbourhood



Sport and Health Culture

Sense of Belonging: Promote badminton culture and sports



Nodes

Inject the micro market around the neighbourhood that allows the residents to get their daily needs within a short journey



Soft Transportation Analysis

Enhance pedestrians walking experience, better streetscape, street furniture provided at higher node or density area.



Local Daily Routine

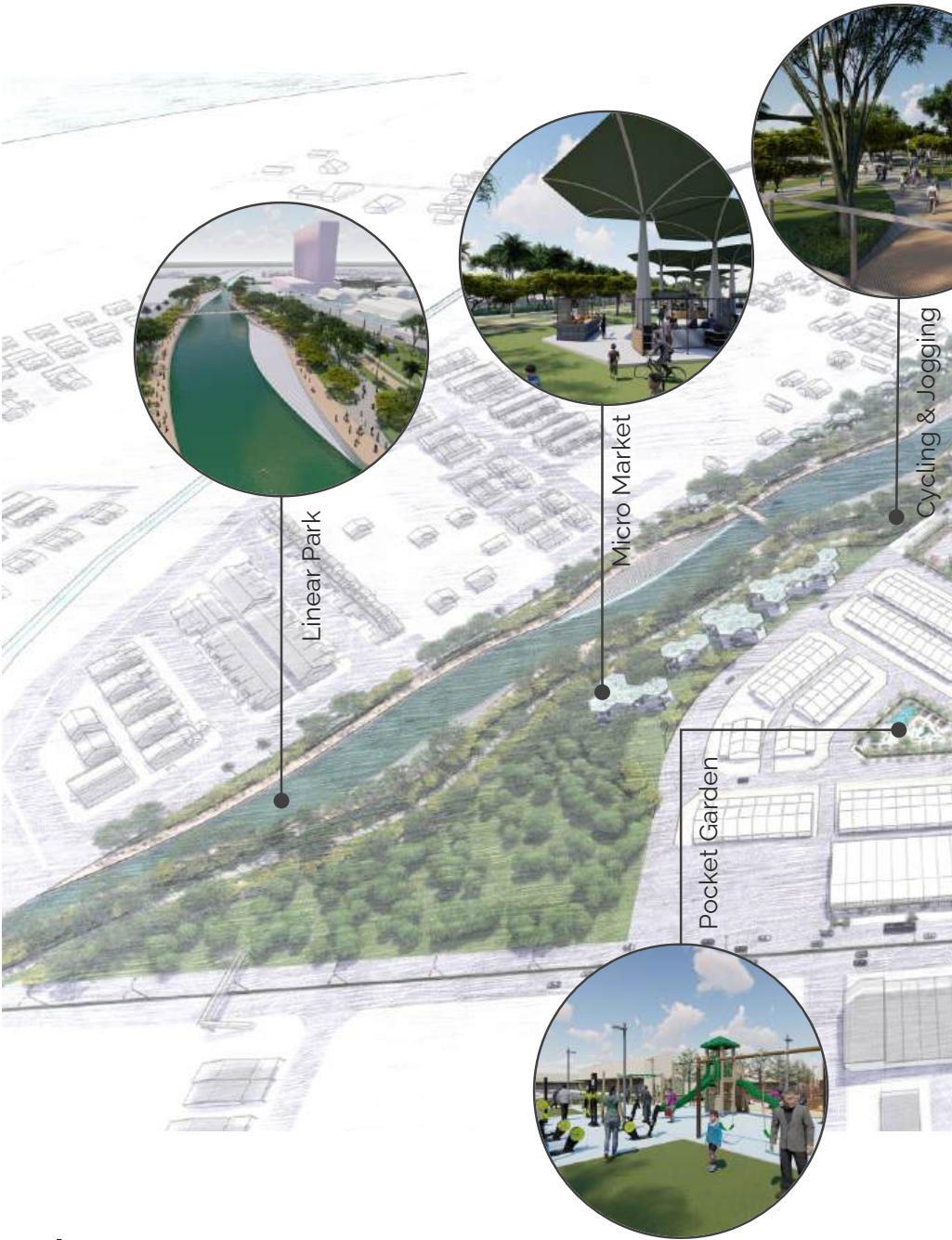
Change of transportation mode to be suggest to locals to reduce carbon emission for example, soft transportation.



Adaptive Reuse

Abandoned building potential to re-engage with the neighbourhood residents

Masterplan - 15 Minute City





Perspectives & Activities



Dengkil Site A



De



ngkil Site A

Case Studies

Precedent Study : Tampines Singapore.



- Juxtaposing low-rise blocks and spaces with high-rise residential blocks in a checker-board pattern to give the illusion of space
- Innovative forms of multi-storey car park design to lessen the monotony of the typical rectangular box shaped car park design
- Landscaping strategies entailing the strategic and selective use of neighborhood parks
- Linking precincts to amenities such as shops, parks and public transit
- Within a neighborhood, a center houses retail shops, eatery and markets to provide residents with their daily needs.
- Neighborhood center is generally located at the crossing of two main estate roads and is within a 10-min walking distance of all flats
- The blocks are designed around a central open space to help create sense of community and belonging
- Town center acts as a terminal point for the public transport system in Tampines



Table 2 Examples of planning standards for new town facilities

Facilities	Size	Planning standards
Commercial:		
1. Shops	30-400 m ²	1 shop to 70 du (TC: 20%, NC: 50%, precincts: 30%)
2. Offices	60 m ²	1 to 450 du (TC: 70%, NC: 30%)
Institutional:		
1. Schools		
primary	1.8 ha	1 to 2300 du
secondary	2.7 ha	1 to 4100 du
college	6.0 ha	1 per new town
2. Library	0.3-0.4 ha	1 per new town
3. Polyclinic	0.5 ha	1 to 30,000 du
4. Community centre	0.4 ha	1 to 4000-5000 du
Sports and recreation:		
1. Complexes		
swimming	1.5 ha	1 per new town
sports	3.0 ha	1 per new town
2. Gardens		
precinct	0.2 ha	1 to 3000 du
neighbourhood	1-1.5 ha	1 per neighbourhood
new town	5-10 ha	1 per new town

Source: Wong and Yeh (1983). Note: "TC" means town center, "NC" means neighborhood centres, "du" means dwelling unit.

Site Issue



- Common space Underutilise



- Discontinued human linkage



- Insufficient Public Facilities



- Poor soft transportation



- Poor socio-economic



- Vacant Land



- Discontinue District

Site Characteristics



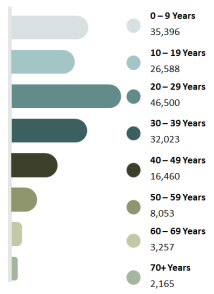
The settlement around the site is diverse with Kampung Melayu on the North and Kampung Bahru Cina at the south .Making Site A the meeting point between the two neighbourhood.



The site is surrounded by 3 major religious building the Dengkil Mosque, Tian Hu Gong Chinese temple, and Mariamman Hindu temple adding to the cultural diversity around site A.



Dengkil foresee a diversity in age demography as the young adults will establish their family and grow old in future dengkil making a diversify age user in near future.



Approach



- Preserving the peaceful mood in Dengkil while integrating inclusive facility to accommodate future needs of expanding family with children and elderly community.



- Reinjecting green spaces as recreational space that is lacking and in demand by the local community.



- Opening up more business opportunity that can foster more job within Dengkil and preserve the benefits of community. Such as commercial plazas and community farming



- Linking public public transport to major working city of the local at Cyberjaya and Putrajaya

Perspectives & Activities

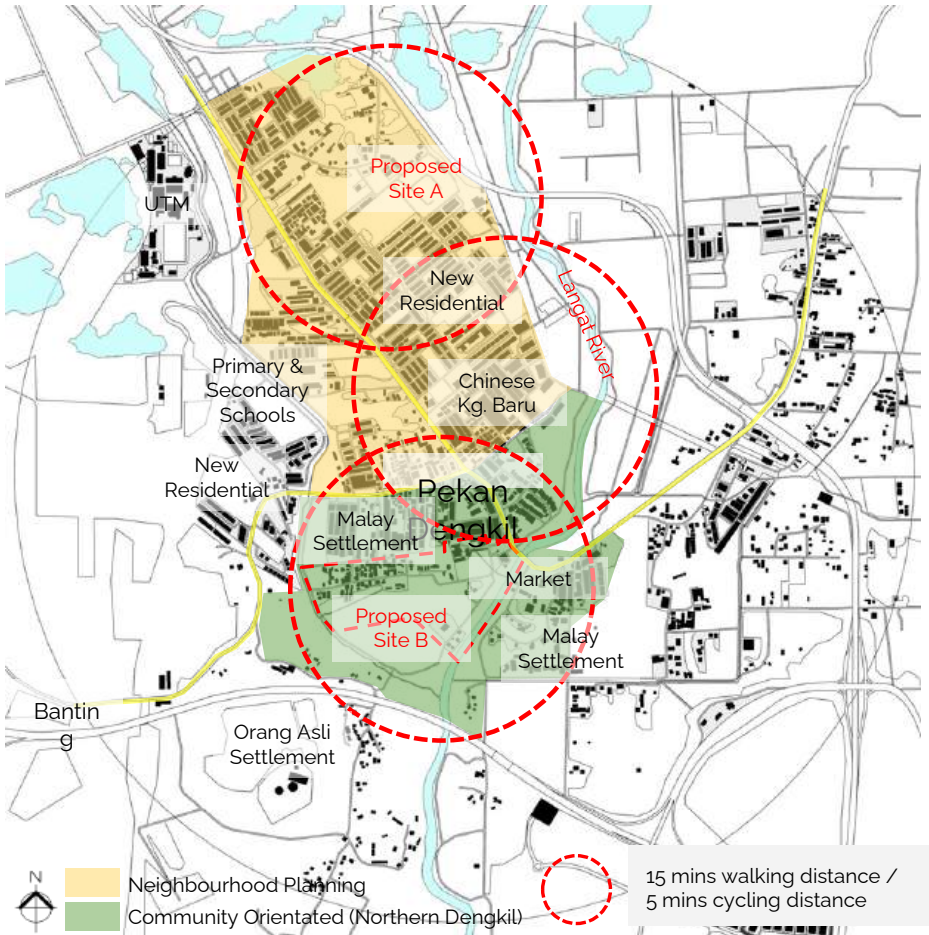
Dengkil Site B





Eco-Living

Literature Review



15-min city concept:

- As cities are struggling to cope with the second wave of the global pandemic, perhaps the most striking realization was the time spend every day commuting to work as well as the lack of amenities at local level.
- To create a neighbourhood that can fulfil the local residents daily needs and activities within 15 min of walking or cycling.

VISION STATEMENT

Envisioned the next Dengkil to be an **eco-living neighbourhood** with the approach of **nature context of the river waterbody integrated** with the existing **malays kampung settlement** and surrounding context.



ECO

- Not harming the environment
- Sustainable
- Naturally balanced
- Respectful of humanity's symbiotic relationship with the nature ecology



LIVING

- The relationship of organism (users) to one another and to their physical surroundings
- Co-supporting every living components in the community
- Foster cycle of life

5 Approaches To Eco Living Planning

Provide amenities to the locals



Diverse programming



Connect to locality



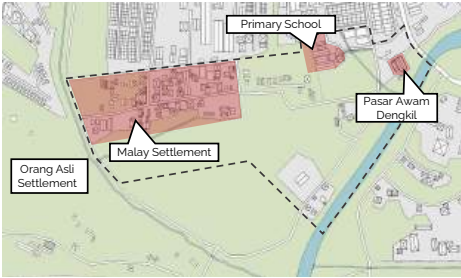
Connect people to the river



Create self-sustaining communities



Neighbourhood Planning Strategies



1. Preserve Existing Community

The living environment of the existing community is enhanced and revitalised towards nature approach to promote sustainability living that inline with the eco-living concept.



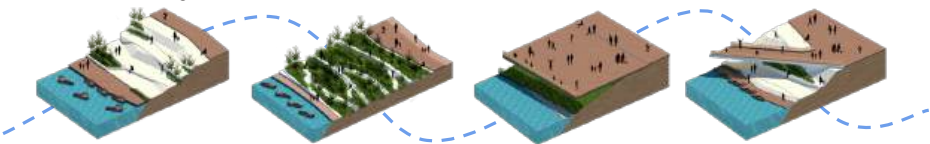
2. Recreational Anchor

Maximising the potential of the riverfront for public recreational purpose and further bring in the publicness to the neighbourhood.

Site B Neighbourhood Masterplan



Riverfront Rejuvenation



Floating Market

Wetland Park

Fishing Deck

Riverfront Promenade



3. Central Network Spine

The circulation network align through a centralised main road in the master-planning to optimise vehicular circular and maximise the pedestrian circulation throughout the neighbourhood.



4. Green Heart of Dengkil

The new neighbourhood proposal of Dengkil is imagined as a green heart of Dengkil that provide lush and wide recreational green spaces that is both rejuvenating and functional.

Residential Parcels



Recreational, Commercial And Facilities Parcels



This neighbourhood masterplanning resemble the life of the tree that correlated to our concept of eco-living neighbourhood that cohesively celebrates the nature and the living environment and the users can grow together in this community.

Perspectives & Activities



Neighbourhood Housing Proposal

Banting Entrepreneur Village

Aryton Kong Tze Khiang



Banting Entrepreneur Village was designed to cater for the B40 and M40 people of Kuala Langat. It targets the young community of Banting's neighbouring villages. With major developments happening in Kuala Langat, and with MPKL's intend to reshape Banting into its main administrative center, Banting is planned to attract younger dwellers, accommodate more white collar workers, and provide more opportunities for commercial activities. This is to help cope with the aging society of Banting, and to boost the local economy.

Besides, through studying the local sociocultural and socioeconomic conditions, it identifies that there is a strong presence of the spirit of entrepreneurship, and many close-knit village communities. These are obvious on the many streets around Banting, where many "Frontyard Entrepreneurs" vend their goods, typically the small F&B businesses, underneath their car porches or unsheltered in front of their homes.

Hence, Banting Entrepreneur Village was designed to replicate such qualities. These village-like homes come with a slightly unconventional layout to provide for flexibility. It is to allow commercial activities to take place in one of the rooms as an option for the home owners. Furthermore, these entrepreneurs who live and work in the complex are supported by an Entrepreneur Facilitation Hub, where it provides spaces, services and equipments typically too difficult or too expensive to acquire. Lastly, the complex is also equipped with a communal kitchen and a communal living that is often seen in the neighbouring villages. This will help comfort the targetted users by giving them a taste of familiarity.

Concept Derivation

Communal Culture



Communal Living and Dining

Frontyard Entrepreneurs



Family Business



Event Spaces



Converted Car Porch to Business



Religious Spaces



Frontyard Businesses

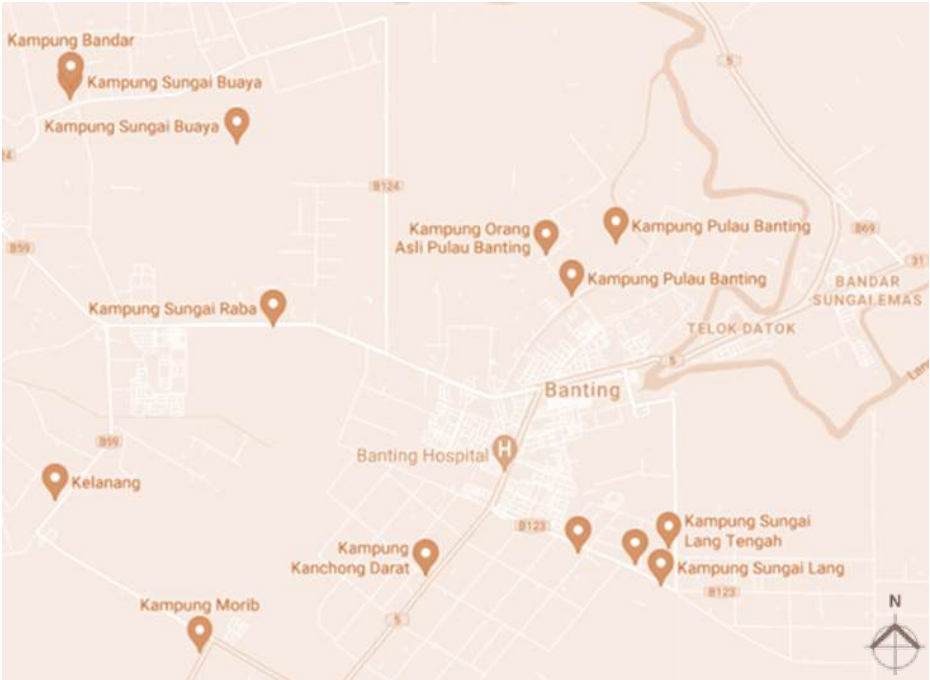


Entertainment Spaces



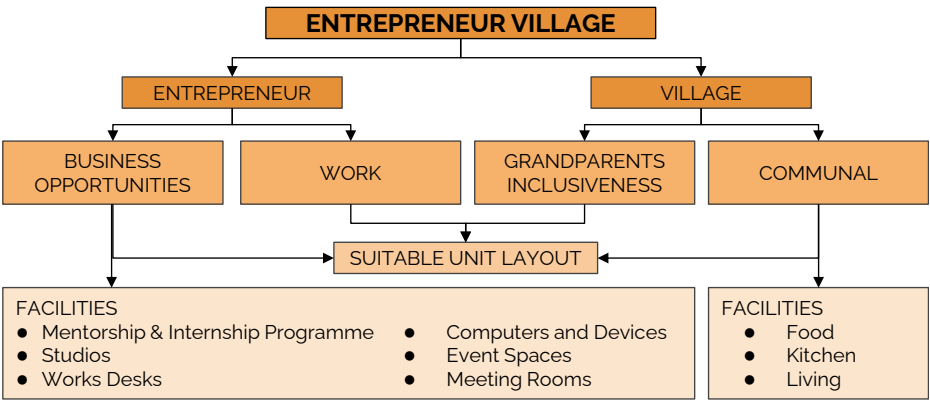
Frontyard Businesses

Concept Derivation

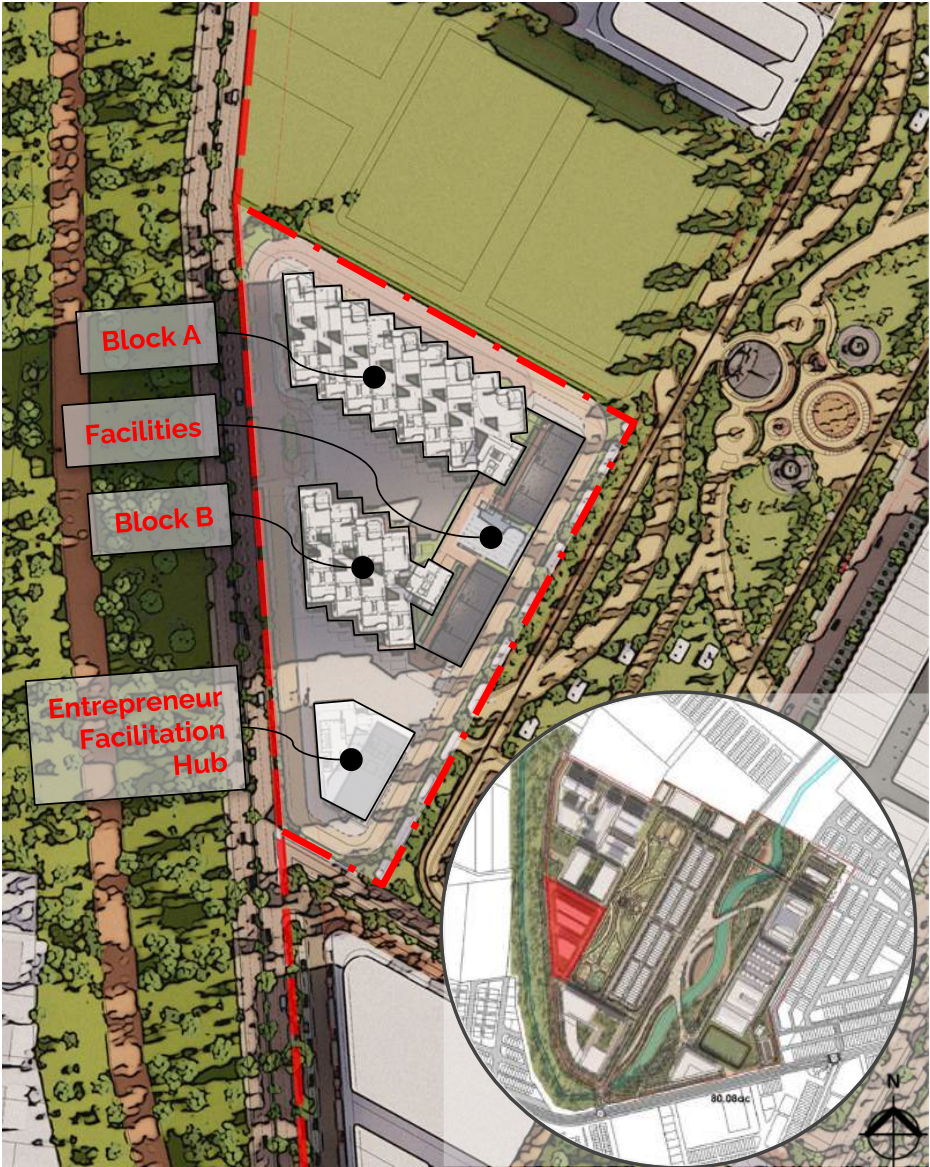


Officially, there are 45 Villages within the Kuala Langat District, and the Tanjung Dua Belas 1 Subdistrict consist of 9 villages. However, unofficially, there are also many more as shown in the plan above.

Concept Objective

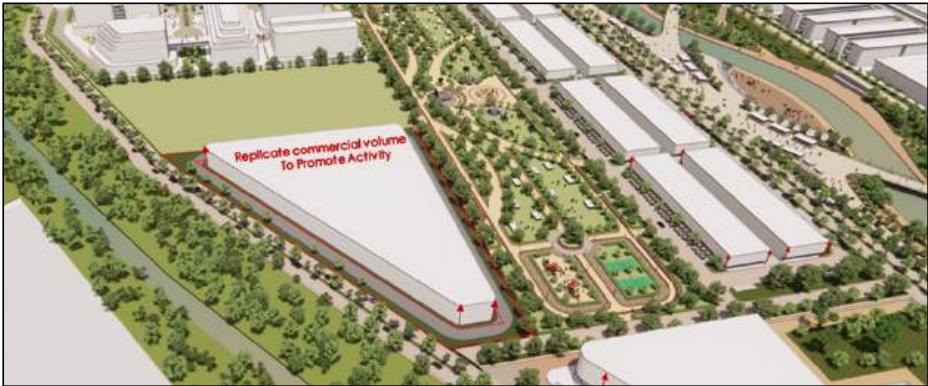


Location Plan & Site Plan



As the site is surrounded with many commercial lots, the design of the current site is to channel those surrounding commercial activities into the site. It intends to bring in pedestrian movement from the neighbouring lots through the central park, and by limiting its vehicular circulation within the site.

Design Mass Study



A. Site Boundaries & Neighbouring Commercial Volumes



B. Breaking The Mass & Volume Orientation



C. Locating The Commercial Spaces And Maintenance Spaces



D. Introducing Residential Towers And Residential Facilities



E. Plan Incorporation, Height Control & Urban Scale



F. Massing Massaging - Maximizing The Views

Podium Floor Plan



Ground Floor Plan



Drop Off Zone



Commercial Plaza Viewed from Facility Floor

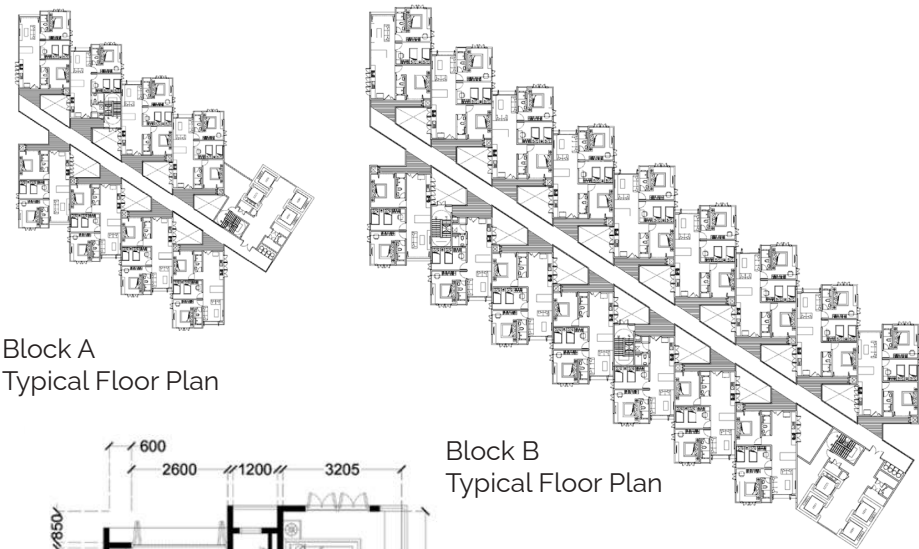


Communal Kitchen and Living



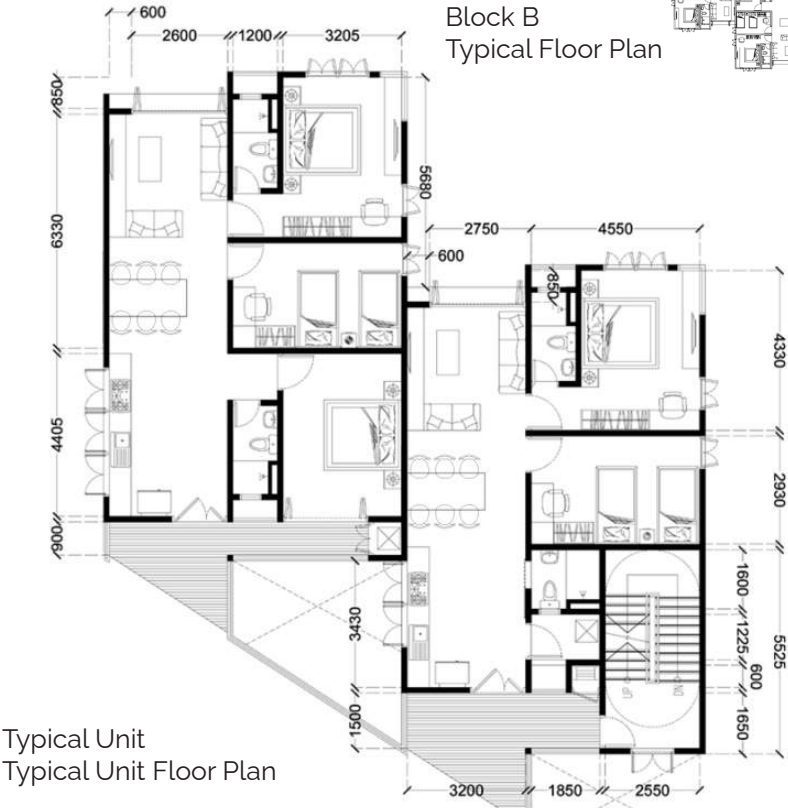
Commercial Plaza

Typical Floor Plan



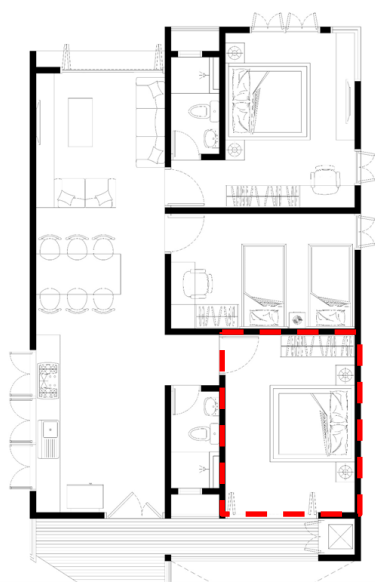
Block A
Typical Floor Plan

Block B
Typical Floor Plan

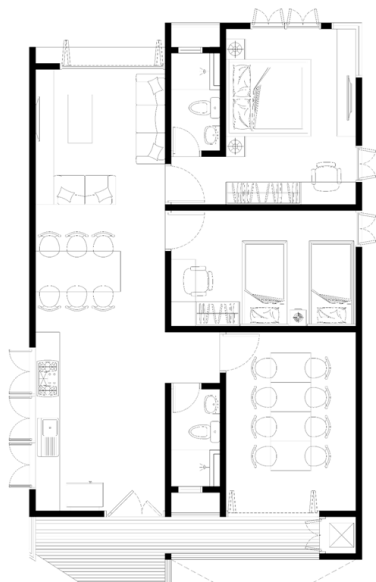


Typical Unit
Typical Unit Floor Plan

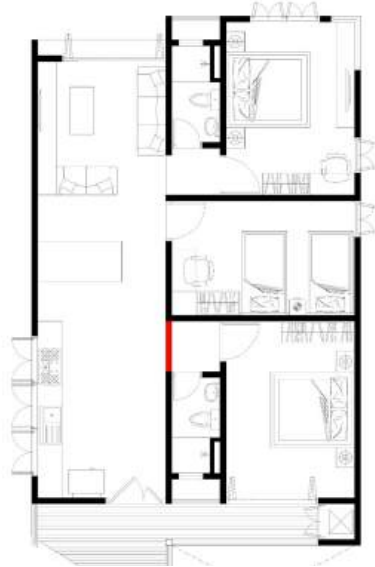
Typical Unit Layouts - Convertible Room Configurations



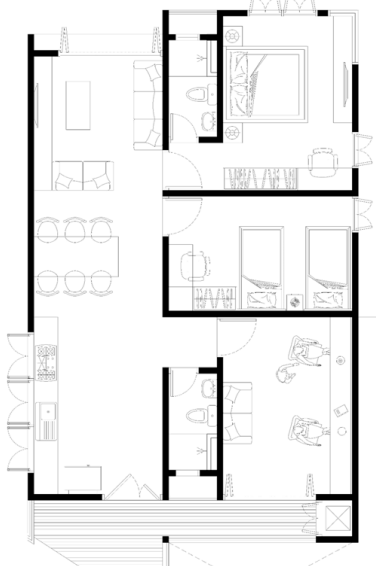
Room 3 - For Grandparents



"Warung" Makan



Dual Key Concept - Rent Out



Mini Saloon

Perspective



Unit Frontyard



Unit Internal View



Lobby Security Management
- Telecom System



Kampung Style Corridor



Convertible room accessible from
Frontyard



Tower View from the Central Park

Social Catalyst Flexible Housing

Chan Kei Wern

General Issues in Affordable Housing

Lifeless Corridor



The common corridor often **become storage area** and become an compact and **inactive area**. The connecting corridor are **narrow** and **ominous**. Such area should be **reactivated** with **more live** and **activity** for the units

High Density



The high density in affordable housing result in **poor ventilation** and **poor natural lighting** into the which is depressing to human psychology. More **light well** can be introduced to allow brighter corridor with natural lighting, and also induce better environment.

Social Isolation



Users within a residential complex **lacks** the sense of **inclusiveness** and **communal sense** among household. This leads to **isolation** and unfriendly community and diminishes the **sense of belonging** within a residential complex.

Inflexibility



Housing model lacks the ability to respond to the shifting demography in typical phases of dwelling and the the countermeasure towards a pandemic.

Concept & Intention

Intention



Proposing flexible units that cater the dwelling cycle at any point of time.

Strategy

- Retractable opening to allow **expandable space**
- Flexible space that can be **multi-functional**



Enhance **social integration** to protect vulnerable group and to empower the ability of the community members.

- **Visual connectivity** between household
- Connected **common space** among units
- **Variety of users** on one level
- **Public facility** that become community activity



Creating an **inclusive residential complex** that provide living quarters for different age groups live within the same community.

- Living quarter that emphasize of user **ergonomics**
- **Slip proof & universal design**
- **Unobstructed mobility** spatial planning

Social Catalysts Flexible Housing

A Home for all user group that improve quality of life and social integration

Floor Plan



The ground floor hosts series of public realm in relation to create synergy with adjacent residential area and commercial blocks. It creates an active frontage and provides eye on streets. The public realm also creates a seamless transition between adjacent sites and acts as a community gathering event space to enhance communal sense.

The ground floor also holds programs that can be shared with the public such as an co working space, retails areas and also a gymnasium to further synergize with the adjacent public park.







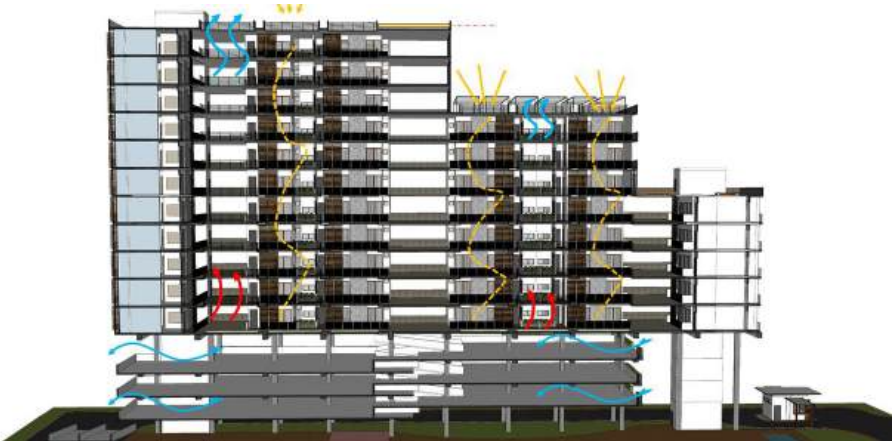
The residents enjoys private courtyard on the podium floor with pleasing landscape to act as a workout and hang out area . On the upper floor it has a community kitchen to allow communal gathering to enhance interaction. The childcare facility also helps to support working parents. The floor acts as a community floor for the residents to allow companionship between the different user group within the residential complex. The roof also host an urban farming to support the community kitchen.

Residential unit has a private unit front porch to allow interior activity to overflow to the corridor. Whereas the corridor is constantly illuminated with natural skylight and ventilation along with strip of green belt in between to create better privacy. Moreover each alcove along the corridor is transformed into a gathering space overlooking to the outdoor park and lake dengkil lake.





The primary facade elements are the timber louver. The timber tone creates a warm and homely tone for the residential towers. The creeper plants also soften the harness of the podium parking by camouflaging it throughout the elevation.



The design incorporate optimum passive design that optimize sky lighting into the corridor to and the air well also encourages stack ventilation. The split level podium parking increases the parking efficiency and low wall to encourage cross ventilation.



Type A unit are flexible family oriented units. The unit serves as a dual key unit as well allowing nuclear family to rent out adjacent room to a tenant. If the nuclear starts expand they can reclaim the adjacent space as a whole unit. The movable wall allow the living area to be expanded and the retractable panels allows the activity to overflow to the front porch for larger gathering space. The unit is capable of responding to pandemic as the bedroom can become a standalone quarantine unit.





Type B unit are meant for working users and also elderly. The layout is straightforward which good visual permeability to ensure unobstructed mobility for elderly people. The working area and functional space is also separated in order to provide a conducive environment for working adults. Furthermore the unit maximize lower counter space and base storage to ease the elderly users. Void within wall also serves as additional storage space within the unit.



Repose Village

Lim Chin Khai

A responsive urban vertical housing for an eco-living neighbourhood to enhance leisure living.

Harmonious arrangement of eco-living style in the community

An idea to preserve the **slow-paced lifestyle** and **social cultural activities** in Dengkil with **sustainable green open spaces**.

A group of housing typology situated in a suburb neighbourhood

To provide an **affordable home** by integrating "**Kampung**" style into vertical village.





Implementation of Dengkil Village character with urban farming strategies allow the community to self-sustain in term of social-economic.



Neighbourhood Wet Market

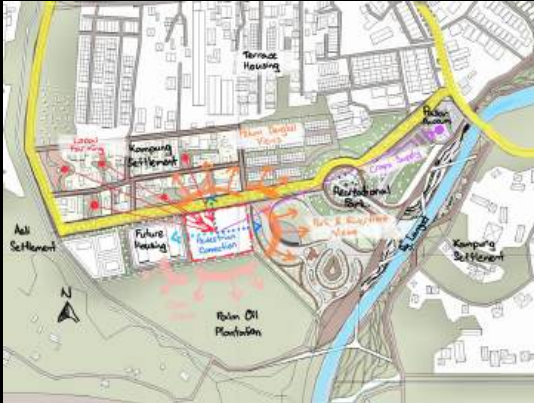


Neighbourhood Farming Crops



Design Development

Site Analysis



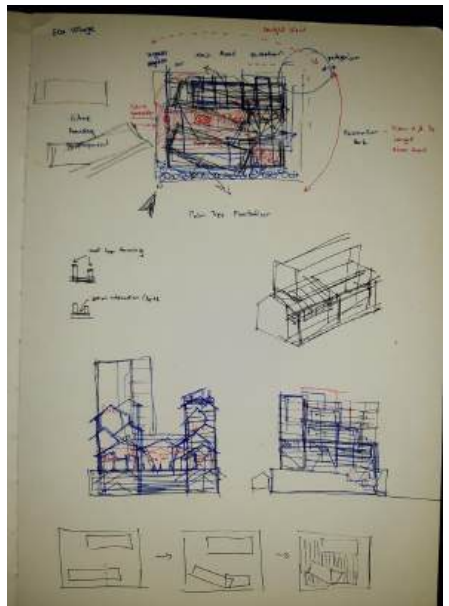
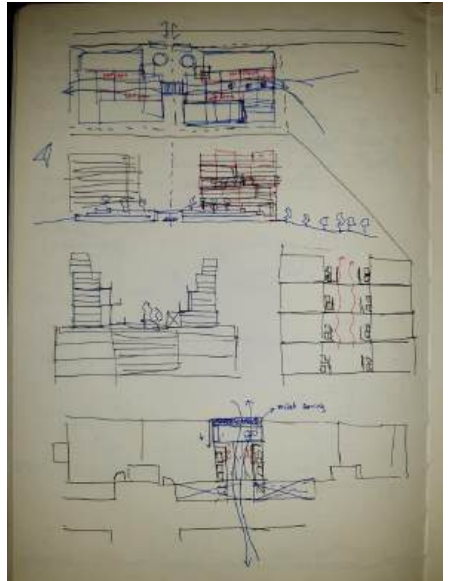
Site Zoning



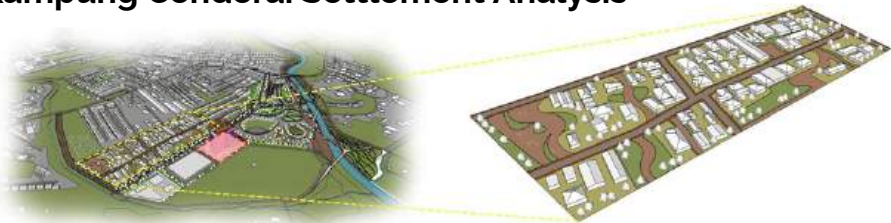
Massing Development



Building planning strategies aim to provide good **connection** between **Neighbourhood and Park**.
Sketches



Kampung Cenderai Settlement Analysis



Neighbourhood

Types	Description	Analysis	Finding
Building Typology	Single Storey <ul style="list-style-type: none"> - Pitch tiles roofing - Brick work construction - Fencing at the porch entrance - Grid window design - Pillar at the carporch 	<p>Single storey housing</p> <p>Single storey housing: Design components such as carporch, pillar, pitch roof, grid window and fencing show the typology of housing in kampung settlement</p>	<p>Settlement typology preservation: the design feature will be preserve and implement in the new vertical housing typology</p>
Space	Single Storey <ul style="list-style-type: none"> - Porch - Clothes drying space - Yard 	<p>Habitation area</p> <p>Space that bring advantage to landed housing such as wide porch space, clothes drying area and yard.</p>	<p>Implement the advantaged space into vertical housing</p>
Capacity	Family housing <ul style="list-style-type: none"> - 1 to 3 child family - grandparents - parents 	<p>Rooms</p> <p>Child (0 - 2) 7.4sqm Parents 11.2sqm Grandparents 11.2sqm</p> <p>The floor area is around 1500sqft - 1800sqft exclude porch and yard.</p>	<p>Unit Layout</p> <p>Family with 1 child (950sqft) Family with 2 child (950sqft) Family with 3 child + grandparents (950sqft + 475sqft = 1425sqft)</p> <p>Feasible unit layout able to fit people needs on the space required.</p>
Distances / Gap	House to house <ul style="list-style-type: none"> - 11m - entry access - easy shot toward windows Pocket space <ul style="list-style-type: none"> - farming/gardening - entrance - carparking 	<p>Pocket space acts as a share space to enter carporch.</p> <p>Gardening Green Alley Farming</p> <p>Distance between housing is less than 10m. Green alley serves as the pedestrian connection or sheltered between housing.</p>	<p>Vertical Arrangement of housing: Neighbourhood connection horizontally by corridor and vertically by staircase.</p> <p>Pocket Space: Farming and gardening activities happen on the roof top as local can access through lift core or stairwell.</p>

The building that facing kampung settlement is designed to have a lower storey. It create a **smooth rhythm of building height** from low (kampung) to high (vertical housing).



Unit Typology

Type A – 850 spft (Small Family)



Living room space can create a **3rd room** to cater increase of family member.

Type B – 850 spft (New Couple)



Dual-key unit provides **hybrid usage** and can combine into a single unit usage when family member increase.

Type C – 1080 spft (Big Family)



Dual-key unit provides hybrid usage and suitable for 7 family members included grandparents.

Type D – 1130 spft (Investment)



Up tp 4 rental rooms with shared living space and balcony.

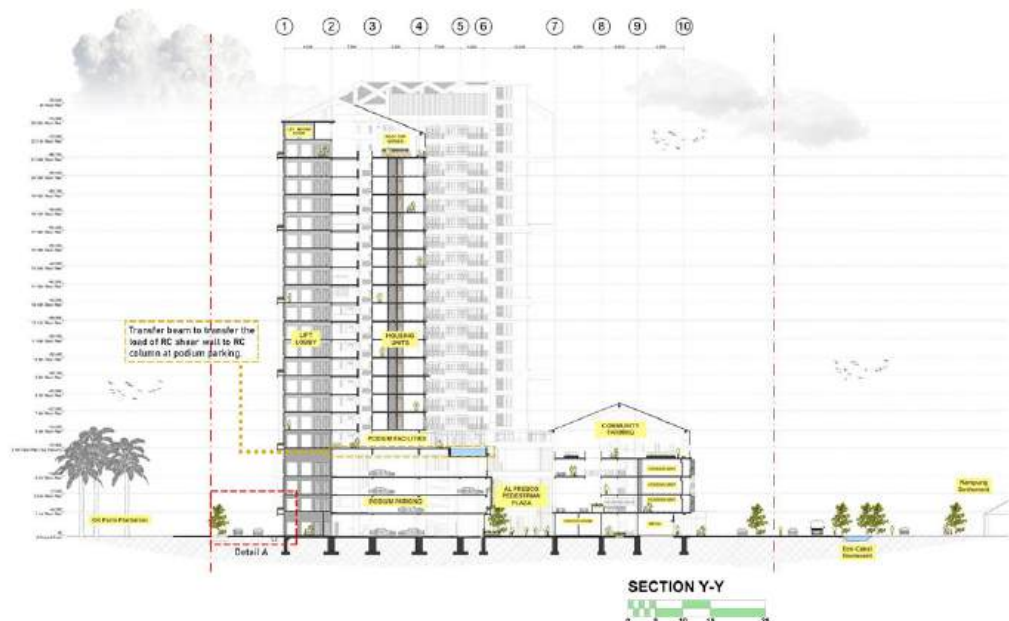
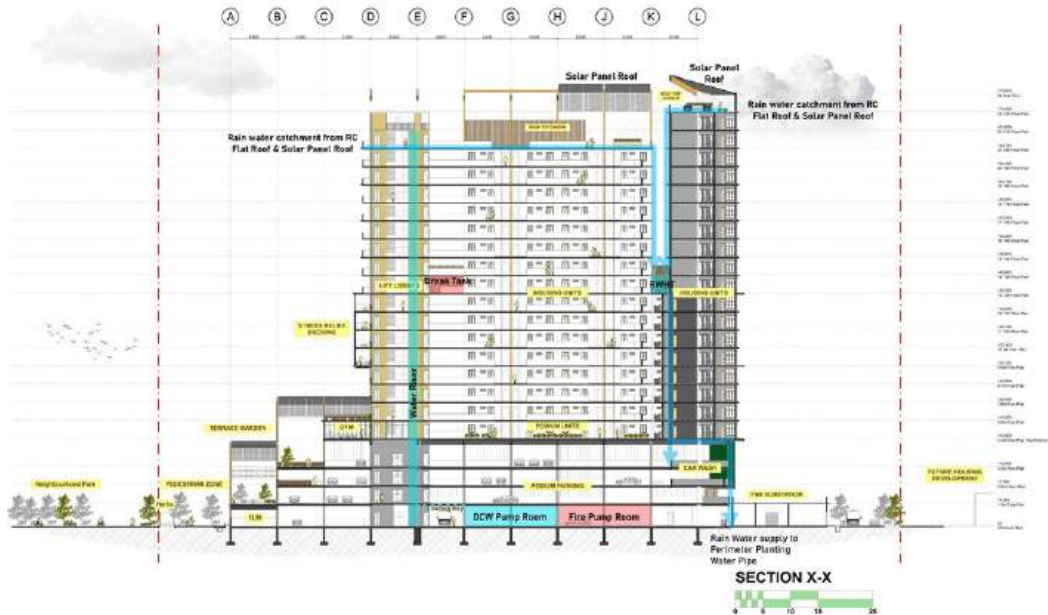
Residents able to sit at the **wider serambi** and achieve **social distancing while communicate** with their neighbours.



Floor Plans



Sections



Sustainable Design

North
Elevation



Sectional
Perspective



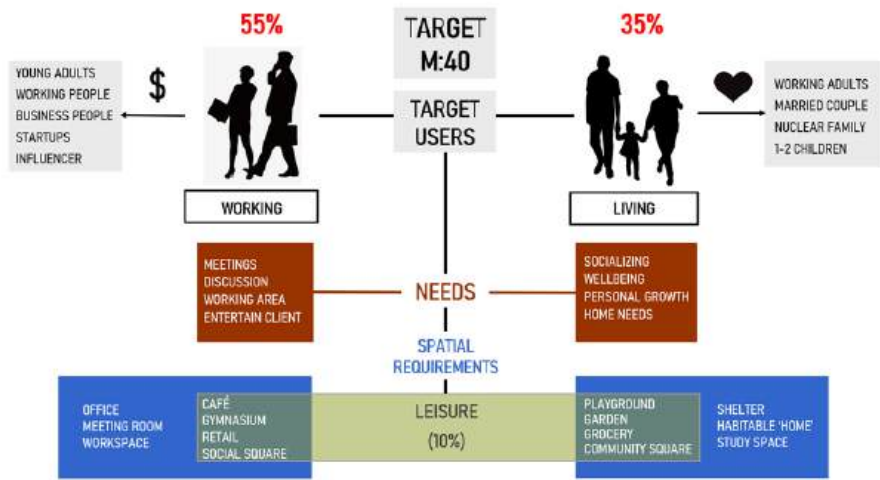


Banting Neighbourhood Exchange

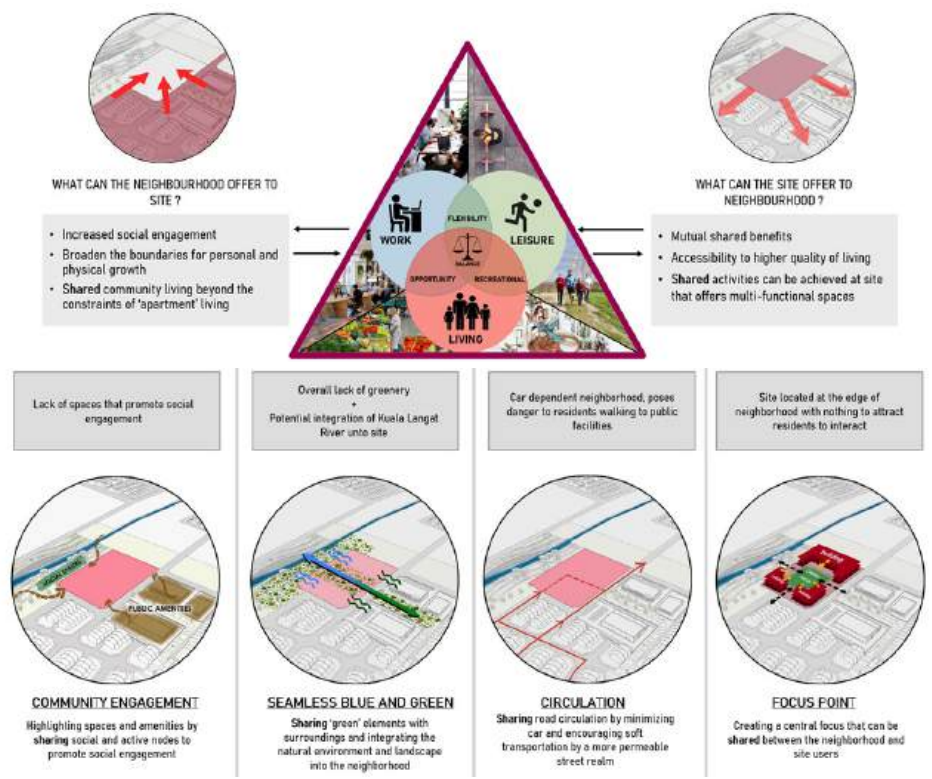
Muhammad Adlin



Target User And User Needs

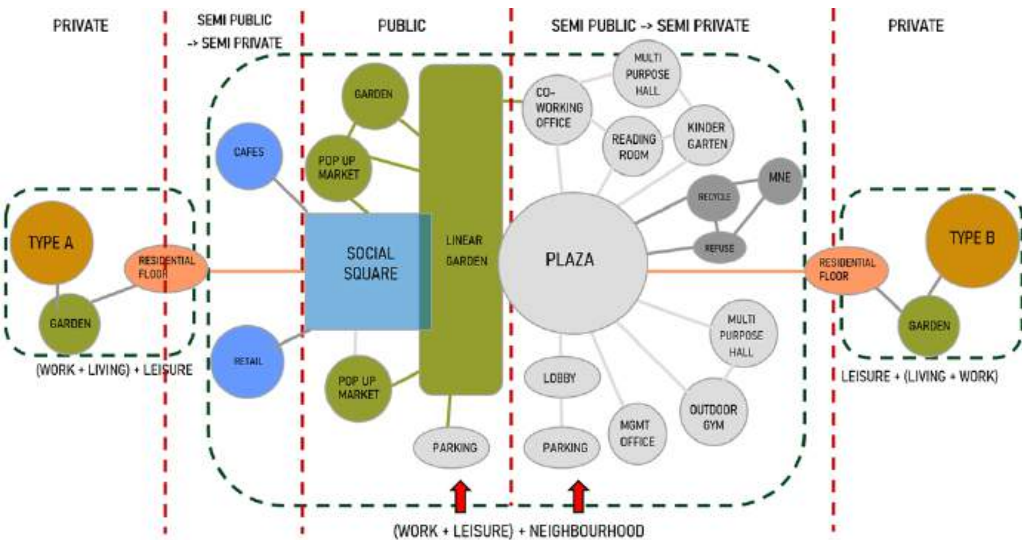


Neighbourhood Needs vs Site Needs



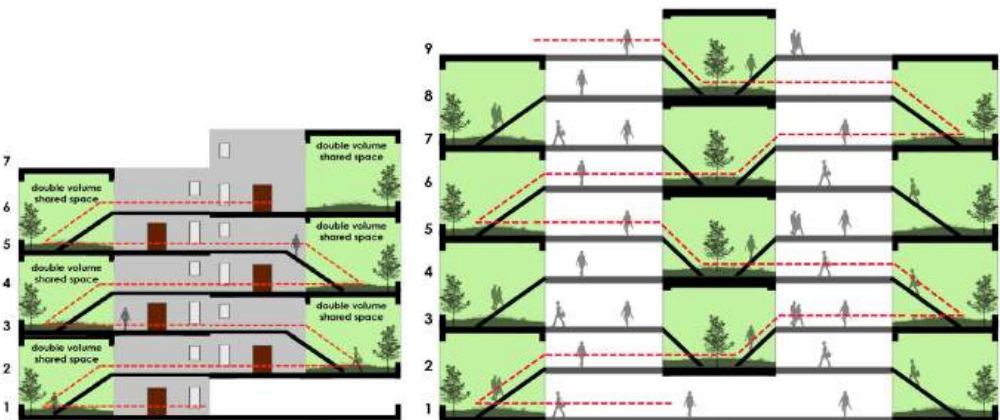
Bubble Diagram

Bubble diagram depicts and interconnected usage which ties with the concept of **WORK + LIVING** for the residents and neighbourhood users



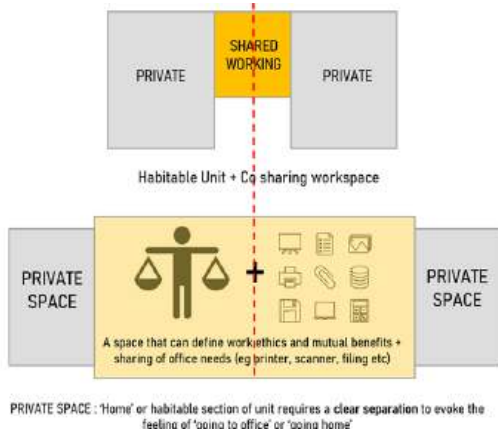
Floor Sharing Concept

Through the use of double volume shared green space, the **FLOOR SHARING CONCEPT** combines floor circulation to create a singular walking, allowing any individual to walk to any point at any desired area without the usage of elevators

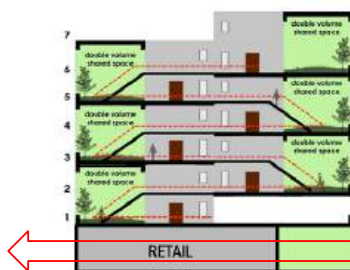


Unit Sharing Concept

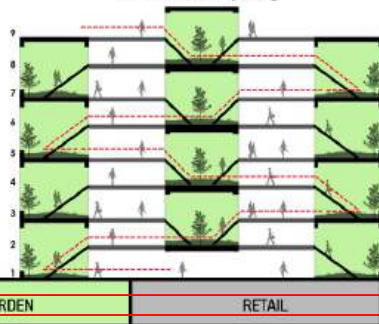
BLOCK A (UNIT TYPE A) : CO-WORKING LIVING LOFT



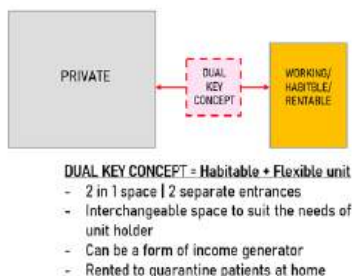
BLOCK A Co-working Loft living



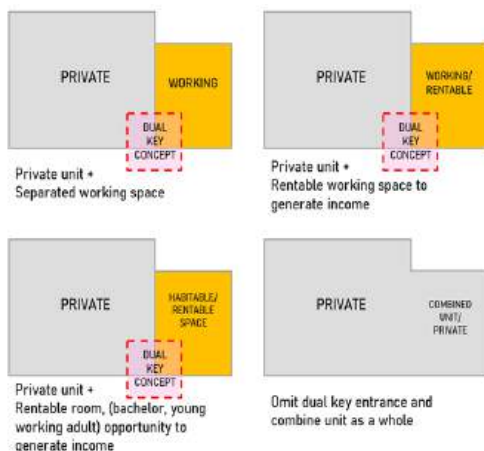
BLOCK B Dual-key living



BLOCK B (UNIT TYPE B) : DUAL-KEY LIVING



TARGET: LIVING
WORKING ADULTS
MARRIED COUPLE
NUCLEAR FAMILY
1-2 CHILDREN



Floor Plans



SERVICES AND MAINTENANCE



BOMBA ROUTE



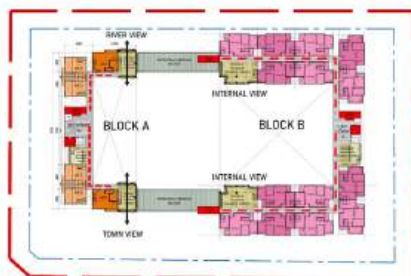
DROP OFF POINTS



PEDESTRIAN CIRCULATION



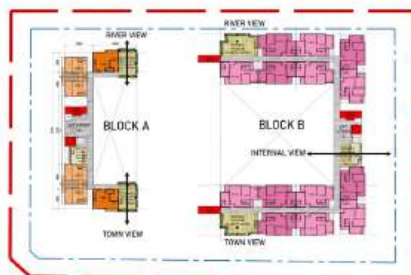
VEHICULAR CIRCULATION



TYPICAL RESIDENTIAL FLOOR PLAN - LEVEL 1, 6



TYPICAL RESIDENTIAL FLOOR PLAN - LEVEL 2, 5



TYPICAL RESIDENTIAL FLOOR PLAN - LEVEL 3, 7



TYPICAL RESIDENTIAL FLOOR PLAN - LEVEL 4, 9



TYPICAL RESIDENTIAL FLOOR PLAN - LEVEL 8 / A2 ROOF LEVEL

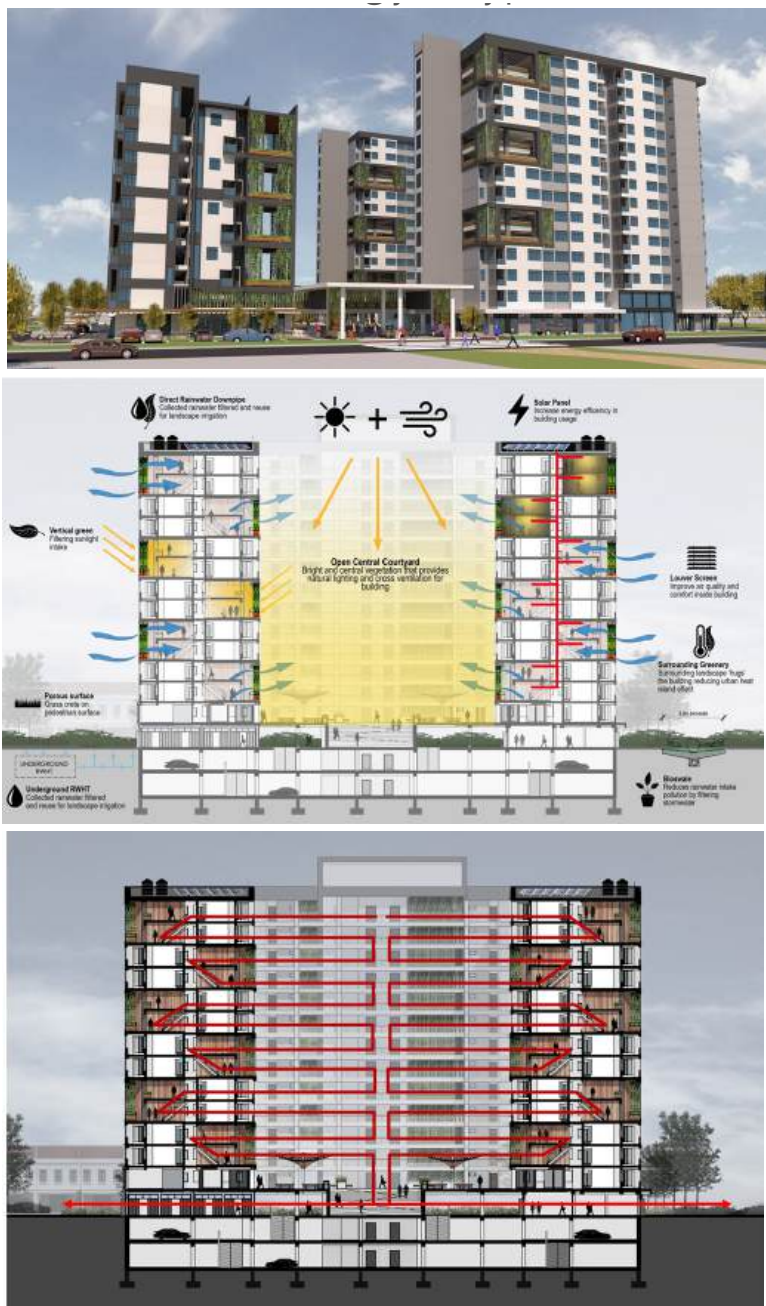


TYPICAL RESIDENTIAL FLOOR PLAN - LEVEL 10 / A1 ROOF LEVEL

■ TYPE A1
 ■ TYPE A2
 ■ TYPE B
■ SHARED SPACE
 ■ FIRE STAIRCASE + ELEVATOR

Sections

Sustainable Strategy + Typical Section



Sections | Perspective



Green Modular Living

Mohamad Nuruddin

Concept Statement



Green Modular Living

Green



Is going green really the way forward?

How can sustainable approach provide a meaningful environment?

Modular



Does modular meant everything is in a fixed unit?

Does it have to look the same and replicated all over?

Living



How can the essence of 'livelihood' appear in this modular environment?

Is Internet a part of basic human needs for living in the contemporary society?

Background Study



*"...a method for people to **grow their dwelling** with themselves..."*

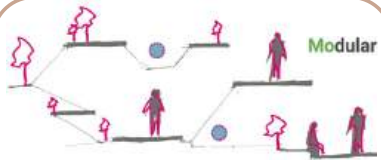
*"...lifts city off the ground and it **enjoys space** in a different way..."*

*"...an alternative way...where it would be possible to have **open spaces** at other levels ..."*



Sir Peter Cook RA (born 22 October 1936)

Issue



Modular

Adaptable + multiplex spatial usage for activities
+ mutually beneficial programmes for residents



Living

Neighbourhood community is lacking of
community spirit




Green

To densify the Banting area (urban densification)

Design Challenge





Human brains
on socializing

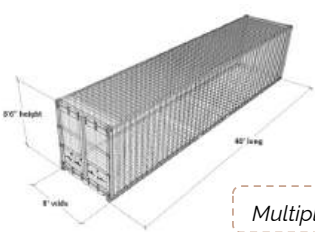
Shultz argues that "being social became a key strength for the primate ancestors of humans" (Shultz et al., 2011)



From individual outdoor compound, then formed a bigger shared compound amongst Kampong residents

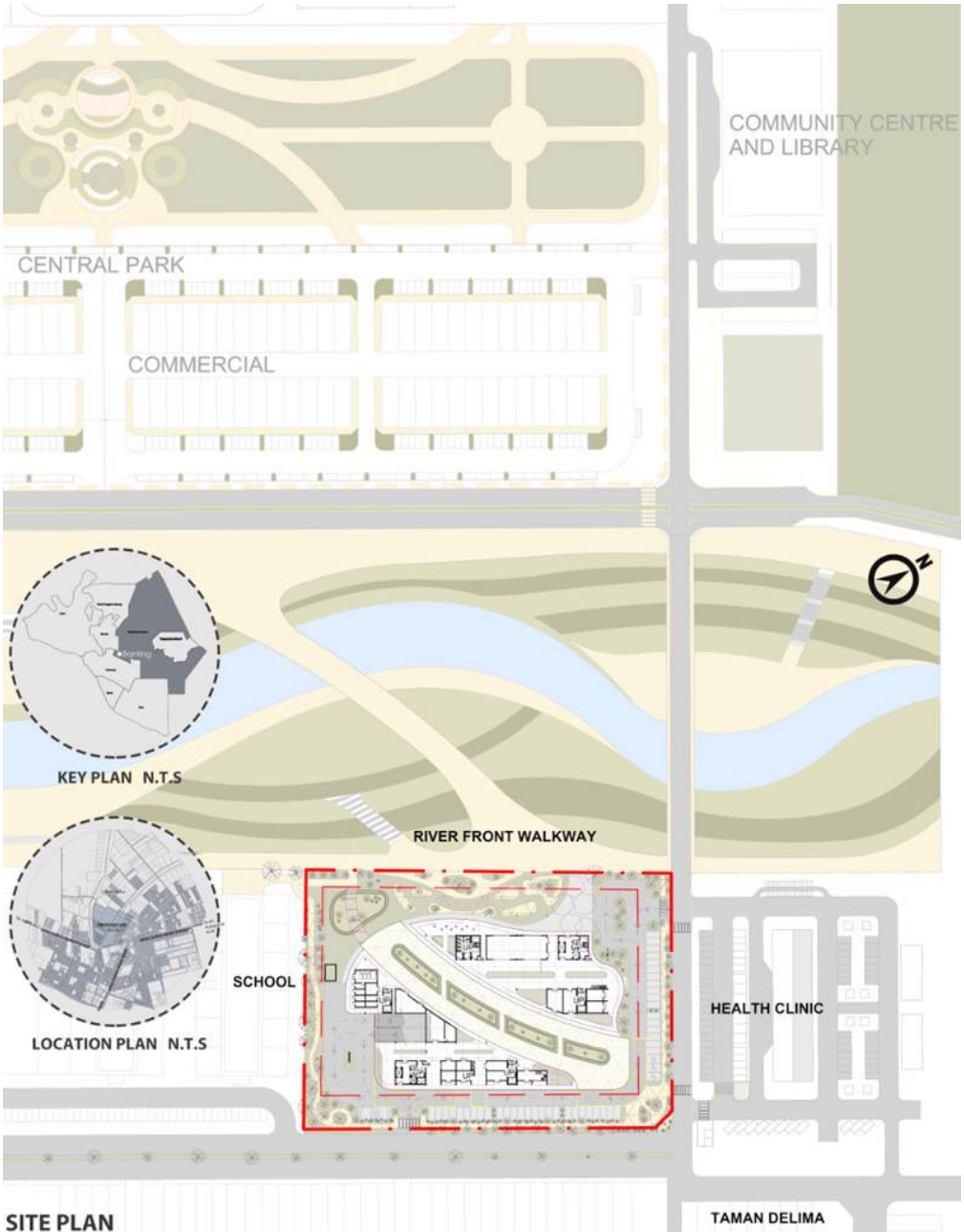
The subcommunity then combined with others, to form a cluster of shared compounds eventually lead to a bigger one- a social generator where small commercial activities, chitchatting, crowd-based activities occur.

Module Layout Experiment

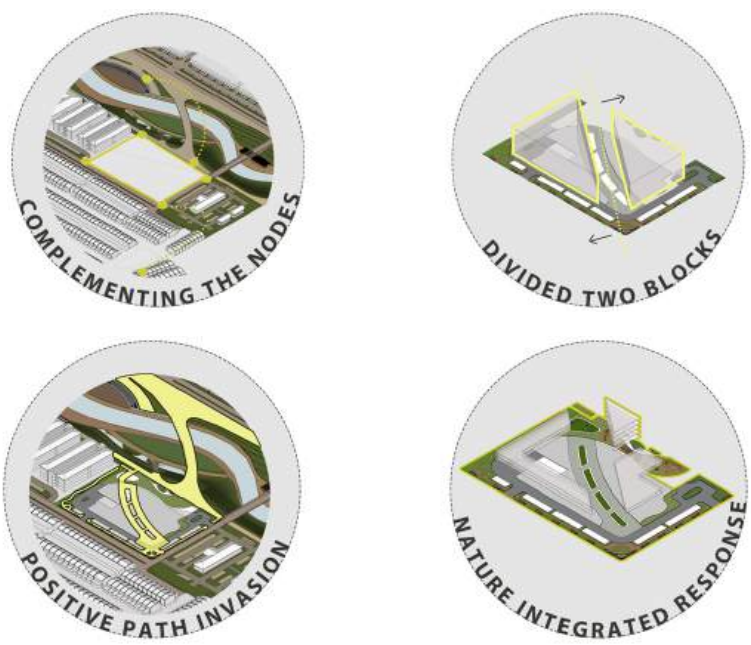


Multiplication of modules using ISO Standard Shipping Container Size

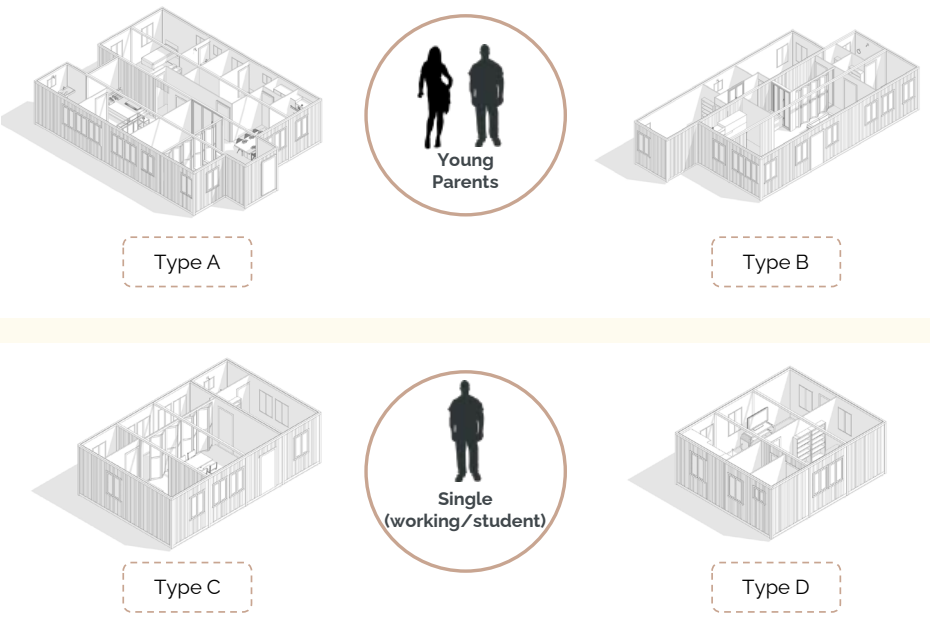
Site Plan



Idea Development

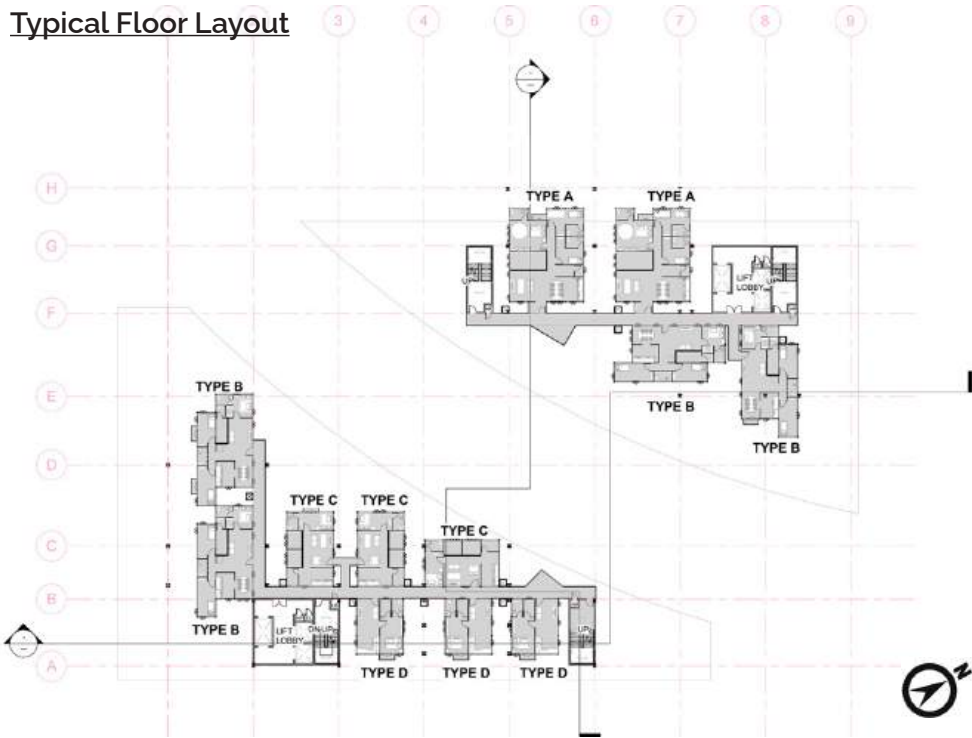


Layout



[illegible]

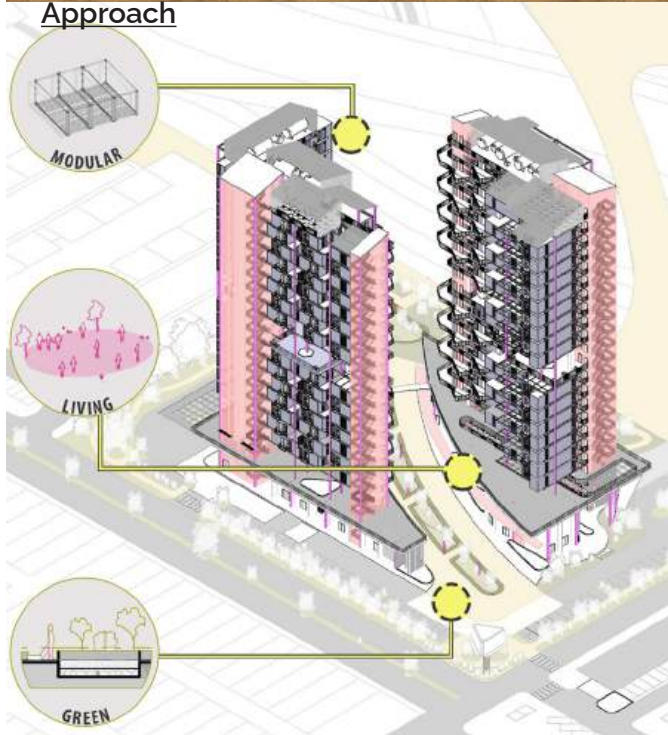
Typical Floor Layout



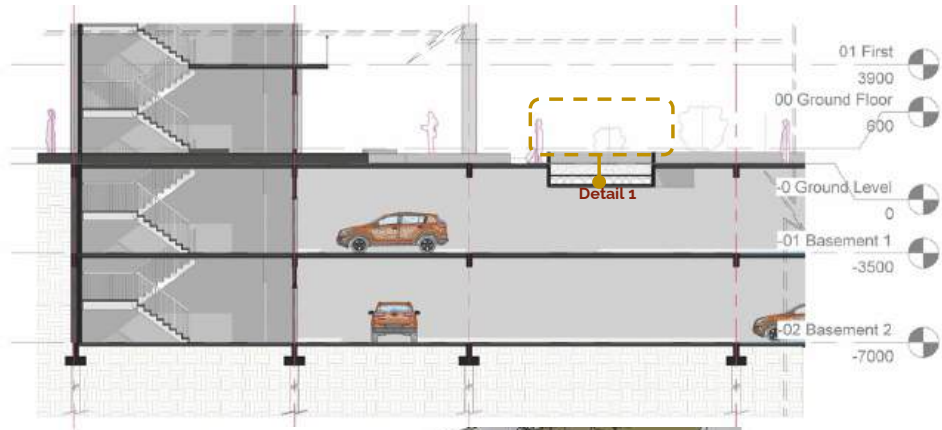
Section



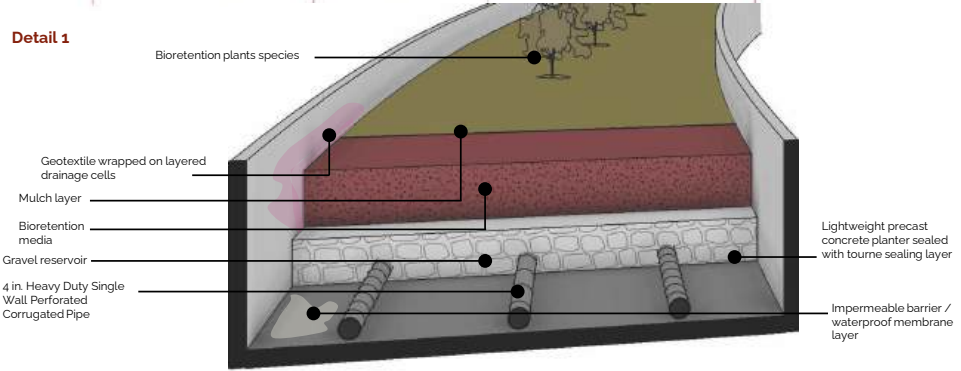
Approach



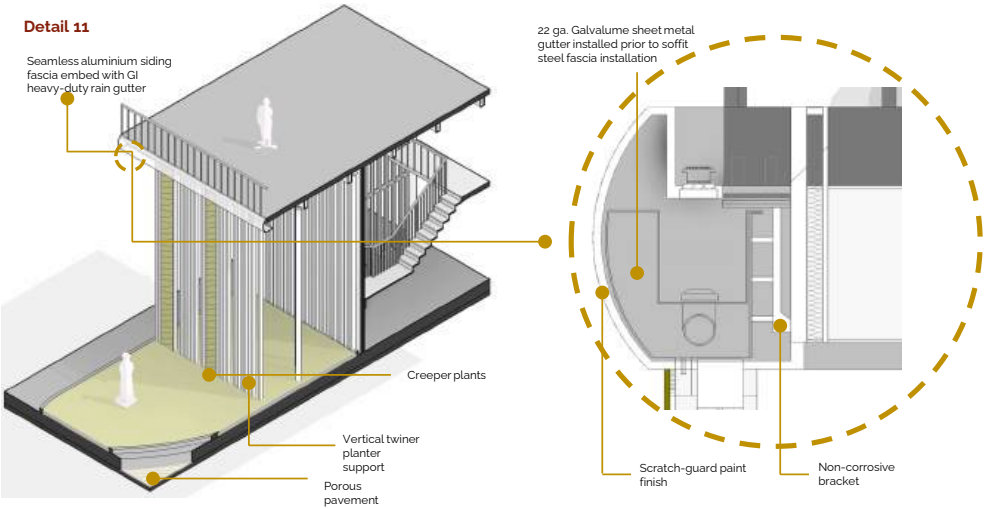
Detail



Detail 1



Detail 11



Collective Living : Urban Village

Tan Yanxian

Dengkil has a mixture of different social classes with T20, M40 and B40 group that live harmoniously as a community. This neighbourhood housing proposal aimed to provide livelihood, increase liveability and enhance interaction of this community through the continuation of social linkage of existing surrounding context. Hence the concept of Collective Living is derived as the support to one and another component.



Emergence of Dengkil

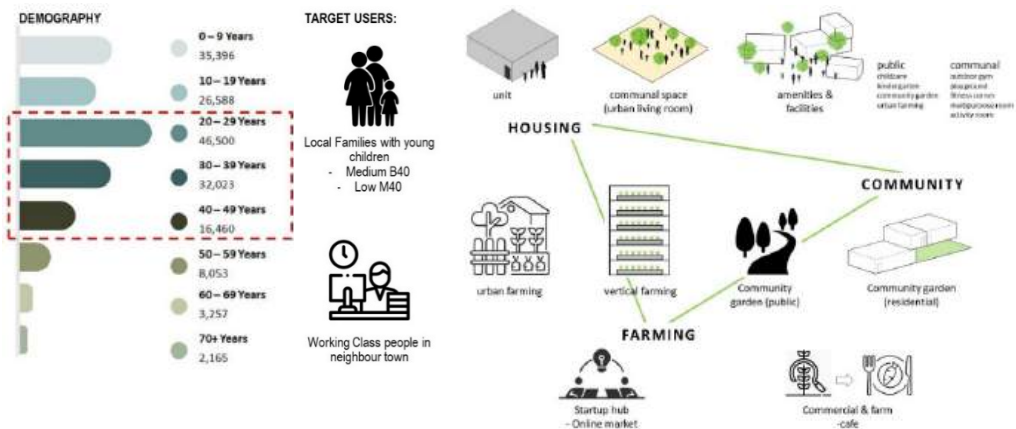
MEMORIES + ACTIVITIES + NETWORKS + COMMUNITY



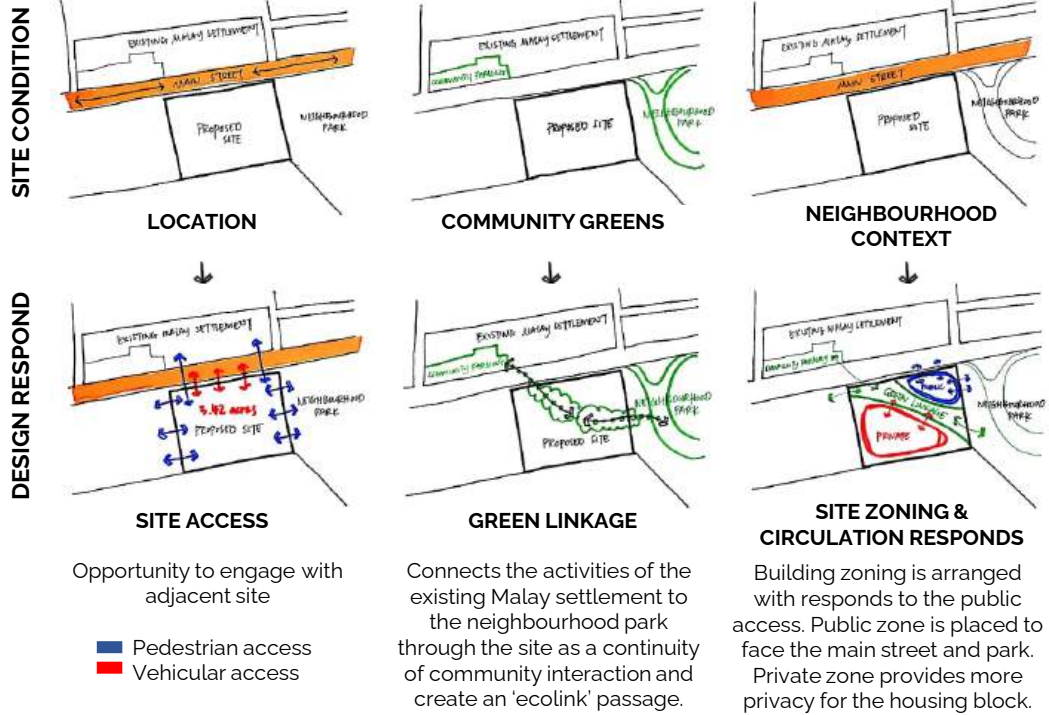


Target User

Design Intention



Site Synthesis & Opportunities



Section A-A



Design Development



Building Setback
12.2m frontage setback and 6.1m setback from side road



Correlating to the context
To create continuity of green linkage through the site.



Interest Point
The block facing the main road is brought down to suit the scale of the existing urban fabric.



Building Programme
Commercial elements acts as a supportive character to encourage micro economic activities.



Breakthrough the Mass
The residential block is breakdown into smaller cluster to allow voids spaces between the volume.

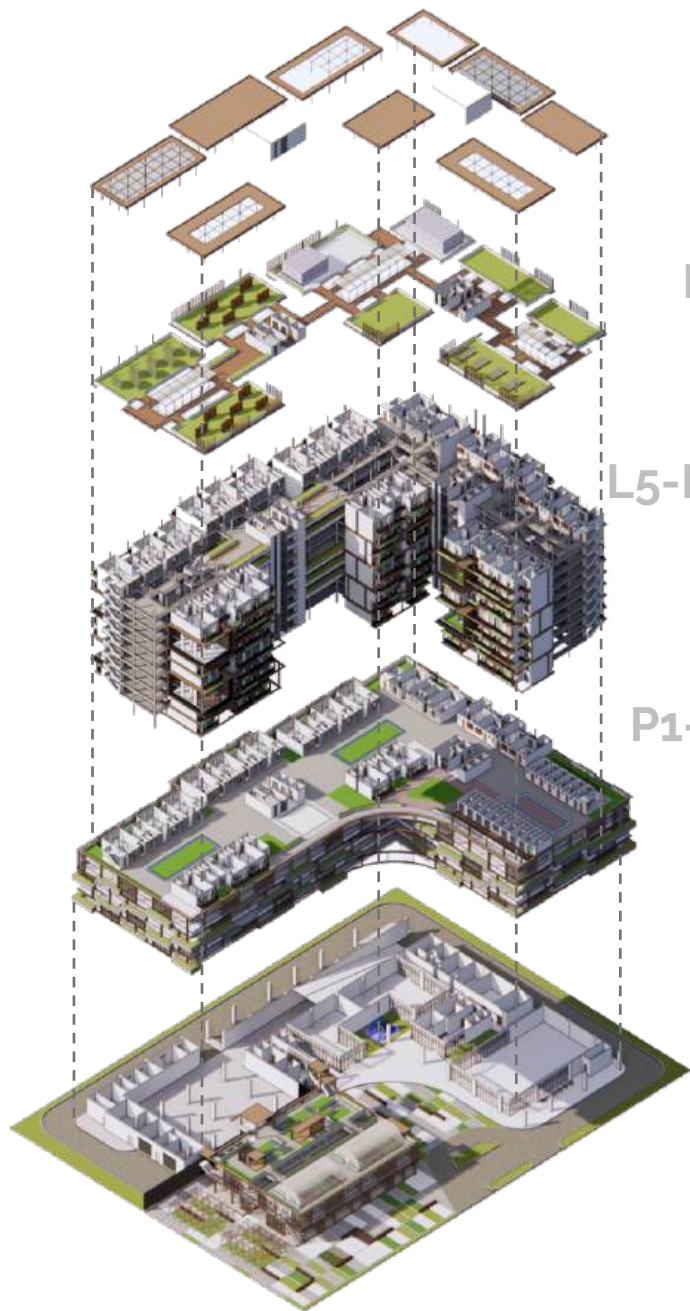


Integration of Landscape
Edible greens allow the resident to harvest own crops and potentially generate extra household income.

Section B-B



Proposed Housing Scheme Program



L15 **Roof Deck**
*Urban farming
Recreational communal
area
Water tanks*

L5-L14 **Residential Floors**
*Library
Shared open spaces
Coworking spaces
Outdoor gymnasium
Playground
Pocket greens*

P1-P4 **Podiums**
*Coliving areas
Pocket greens
Urban farming
Carpark Storage
Services*

G **Ground Meeting Point**
*Urban farming & open
landscape
Retails
Multipurpose hall
Kindergarten
Childcare centre
Prayers Room & Toilets
Services*

Green Building Design



1 Natural Ventilation

The spaces are planned to allow openness and facilitate cross ventilation throughout the building.

2 Rainwater Harvesting

The rainwater is collected and stored at Podium P4 to irrigate the community farming area and green landscape in the building.

3 Low E-Glass

All glass windows are made of low e-glass to reduce solar heat gain but allow maximum daylight to pass through.

4 Green Buffers

The building is surrounded in and out by vegetation that contributes in reducing the urban heat island effect and enhances indoor air freshness.

5 Porous Surface

Grass crete on driveway and pedestrian pavements.

6 Pedestrian Linkage

Pedestrian walkway is provided into the site and bicycle hub located on ground floor encourages cycling as another transportation option.

Perspective



Frontage Perspective



Level 5 Facility Floor



Microeconomics



Housing Facade



Common Corridor

Harmony Living

Tee Soon Hin

Dengkil is a mukim in Sepang district with well connection to other developed places such as Cyberjaya, Putrajaya. It has a strong community bond, diversity of users and peaceful living environment. The purpose of the project is to design a neighbourhood housing in Dengkil site in order to create a better living environment, fulfil the local needs and proposed the solution towards the impact of covid pandemic, neighbourhood spaces, economic, socio-culture and so on.

PHASE 3 VISION

"Future of Harmony Living"

A place where all communities and families are safe, peaceful in the quality of life with maintaining the current strong community bond and convenience living lifestyle. Enhance the local identity and encourage social interaction.



BUILDING CONCEPT



LANDSCAPE



GREENERY



MATERIAL & FORM



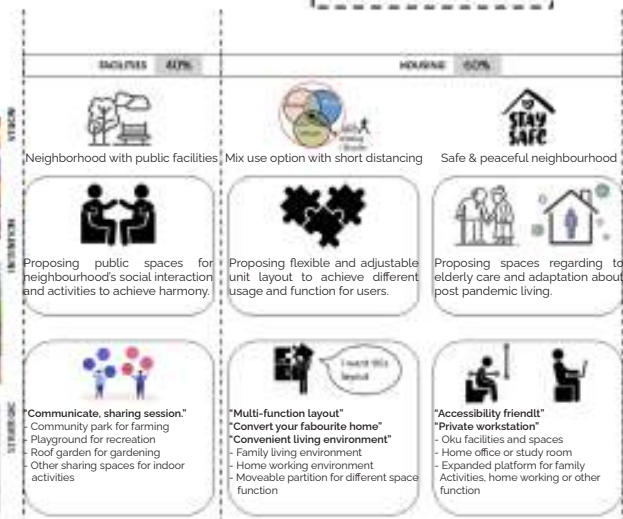
STRUCTURE

"Living nature"

The idea that human and nature are equal forces of the earth that should be living in harmony. Amongst its core concept is the idea that building, as any living organism, growing from within its Environment and adapt to it. Therefore be designed as if it was molded by nature for and from that landscape. Likewise, the color scheme derive from greenery and rock to match the elements of nature.

INTENTION & STRATEGIC

LEISURE + HOME + WORK



TARGET USER



Young adult or young working adult



Elderly people



Price range of houses hike up so fast



Starting to build individual household



More job Opportunity



Elderly Increasing

PROPOSED UNIT LAYOUT CONCEPT

Extendable Unit



Staggered And Cascading Configuration



Flexible Wall



OPTIONAL LAYOUT SINGL UNIT FAMILY UNIT

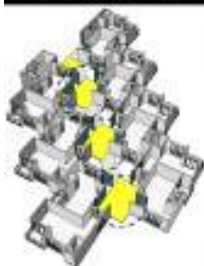
BENEFIT

FLUIDITY: EXTENDABLE PARTITION
ADDITIONAL OPENING
MORE PLEASANT VIEWS
TO THE SURROUNDING
NEIGHBOURHOOD

Flexibility: spatial extension
Detachable/ movable wall for
users to create their personal
space either sharing or private
purpose.

Spaces				
MATCHED ROOM	INNOV.			
BEDROOM 1 & 2	INNOV.			
KITCHEN	INNOV.			
BATH 1 & 2	INNOV.			
LIVING ROOM	ROOM	WORKSPACE	WORK	MODE
DINING ROOM	ROOM	MEETING ROOM	WORK	MODE

CORRIDOR - SOCIAL INTERACTION



CORRIDOR - SOCIAL



Scale 1: 75



Scale 1: 75



Scale 1: 75



Scale 1: 75

Layout: Fixed
Occupant: Elderly Family
Function: Safety and Convenience for Elderly



UNIT TYPE C1
(ELDERLY UNIT)
800 SQFT

Elderly Careless



TYPE C1
EXTENDABLE C4
SEMI-PRIVATE
CHOICE



Layout: Wall Breaking Point
Occupant: Young Working Adult
Function: SOHO



UNIT TYPE C1
(SOHO UNIT)
800 SQFT

Extendable Wall
Home Office Zone
Flexible Zone



TYPE C1
MOVABLE WALL TO
CREATE DIFFERENT
FUNCTION

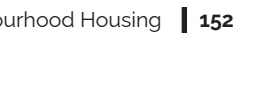


Layout: Flexible
Occupant: Young Family
Function: Home + Office

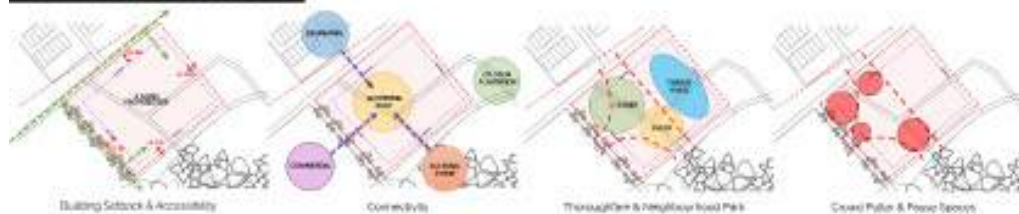


UNIT TYPE C2
(HOME + OFFICE)
800 SQFT

Family Zone/Hotel
Private Zone/Office
Semi-Private Zone/Work



PLANNING STRATEGY & MOOD IMAGES



GROUND FLOOR PLAN



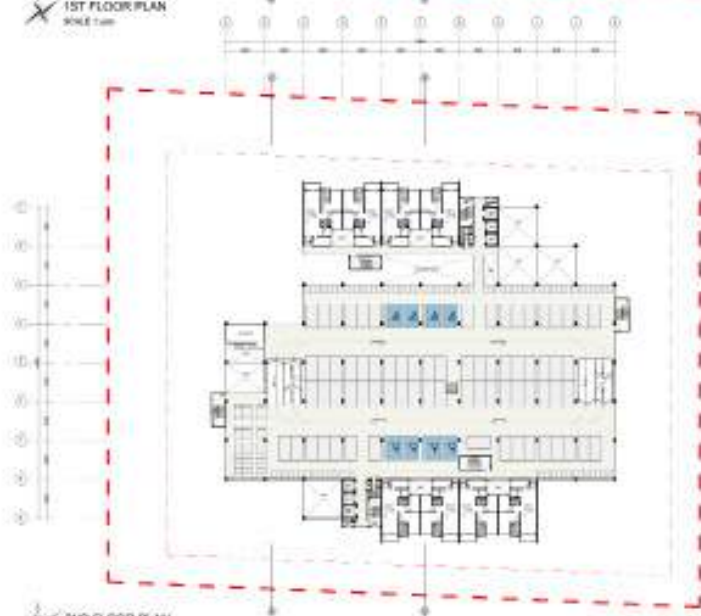
PERSPECTIVES VIEW



CAR PARK FLOOR PLAN



1ST FLOOR PLAN
SCALE 1:500



2ND FLOOR PLAN
SCALE 1:500

PERSPECTIVES VIEW



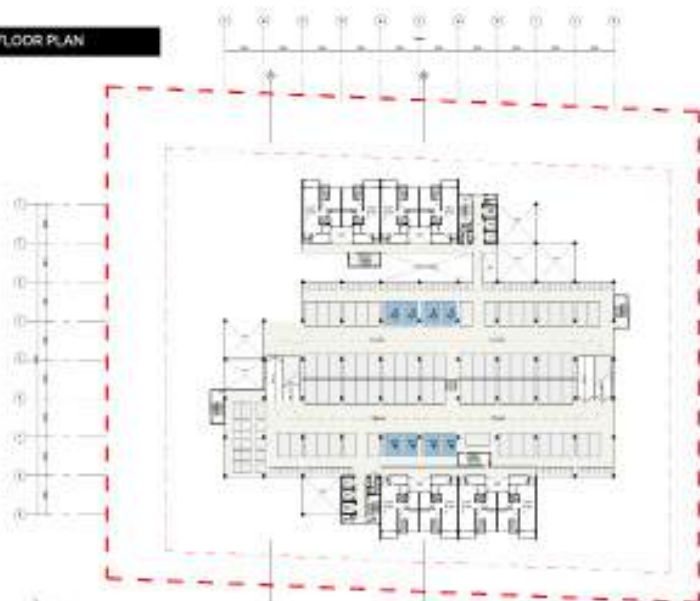
Building Corner

Micro-library / Study Area

Podium Parking

Communal Garden

CAR PARK FLOOR PLAN



3RD FLOOR PLAN
SCALE 1:500

FACILITIES FLOOR PLAN



4TH FLOOR PLAN
SCALE 1:500

PERSPECTIVES VIEW



Swimming Pool

Children Playground

Rock Climbing

Amphitheater

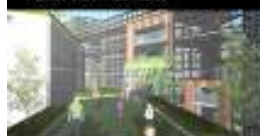
TYPICAL FLOOR PLAN



ROOF PLAN



PERSPECTIVES VIEW



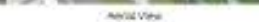
Roof Garden



View from Primary Road



View from Secondary Road



Aerial View

ELEVATION - MATERIALS & SUSTAINABILITY



FRONT ELEVATION SCALE 1:500



REAR ELEVATION SCALE 1:500



LEFT ELEVATION SCALE 1:500



RIGHT ELEVATION SCALE 1:500

Roof Louver



Roof of this building is covered with the box louvers which are an efficient shading device especially in the hot climatic regions like Malaysia. This device provides daylight while regulating both solar heat gain. This reduces the premises need for electricity thereby providing significant cost cuts. Furthermore, this device is not covered with anything, so it is not disturbing natural ventilation.

West Block + Privacy



Allowing sufficient natural lighting and ventilation for the corridor.

West Block + Privacy



Modelled by element of nature.

Plaster Box



Modelled by element of nature. The greenery work as a shading device and it is efficient in psychological cooling. However, they do not affect ventilation.

Recycle Materials



Local timber resources, up-cycled buckets, etc. Sun shading and allowing cross ventilation.

Canopy Inspired by Existing Oil Palm Tree

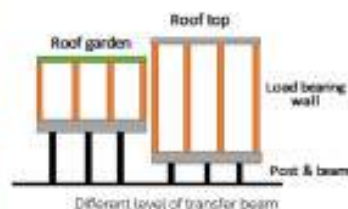


Canopy structure represents the pattern of the palm stem and the roof cover represents the curved form and the movement of the leaf.

SECTION - SPACE ZONING & CONSTRUCTION



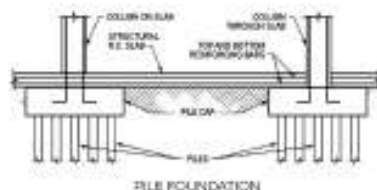
Hanging & floating column



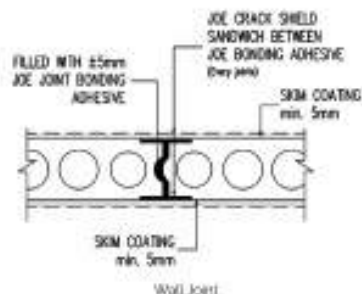
Indirect pumping system



Lightweight concrete hollow core wall / floor panel



DESCRIPTION	LIGHTWEIGHT CONCRETE HOLLOW CORE WALL PANEL
STRENGTH	VERY HIGH
RESISTANT TO MOISTURE	VERY HIGH
SOUND INSULATION	VERY HIGH
RESISTANT TO FIRE	HIGH
REQUIREMENT FOR LABOR	VERY LOW
INSTALL SPEED	VERY HIGH
ELECTRICAL INSTALLATION	EASY
THICKNESS OF PLASTER	ONLY SKIM COATING



Biophilia Residence

Wee Keng Ean

Biophilia Resident

Biophilia Resident have a vision to preserve the river and green environment as a memento for the next generation Community work hand to hand preserving the natural environment in Banting while educate the importance to young generation as Mother nature is to protected by everybody without society boundaries.



Project Aim

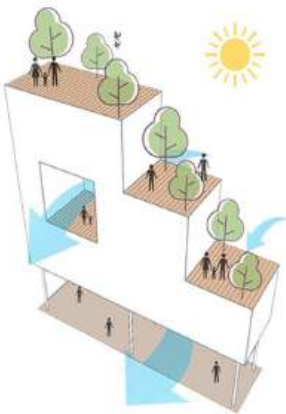
Banting is home of traditional business, The loss of young generations in Banting due to migration of local youth to bigger city area like Petaling Jaya or Subang Jaya for better job opportunity have slow down the economic growth in local area.

The projects aims to bring back the locals from outstate city area especially the youth to allocate in Banting. Biophilia residents are designed to attract different income group varies from normal to high income class to stimulate local economy.



Biophilic Living

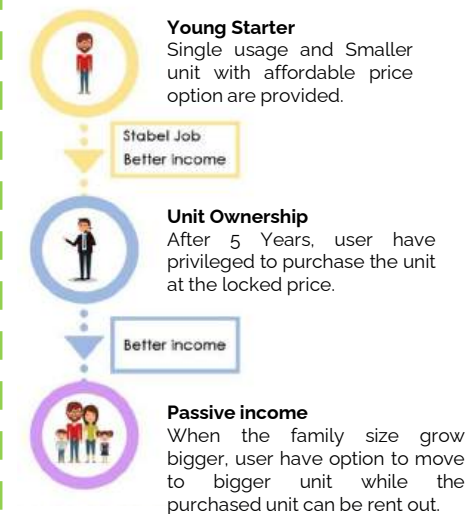
Biophilic elements are implemented in every level of the resident project



Socio-economic Strategies

Rent to Buy Ownership

Rent to Buy with 5 years of moratorium are provided to aid Young starters to have ownership on their unit along their income & unit usage growth timeline



Improving Household income Strategies



Community Business

Market space & Food courts are provided for local residents to conduct small business.



FundRaising Event

Community Hall provide space for local to held fund raising events like sport competition



Urban Farming

Growing own food cycle creates sustainable food supply chain to local residents.



Walking distance Amenities

Locating nearby School, Workplace and Market allow residents to save transportation cost.

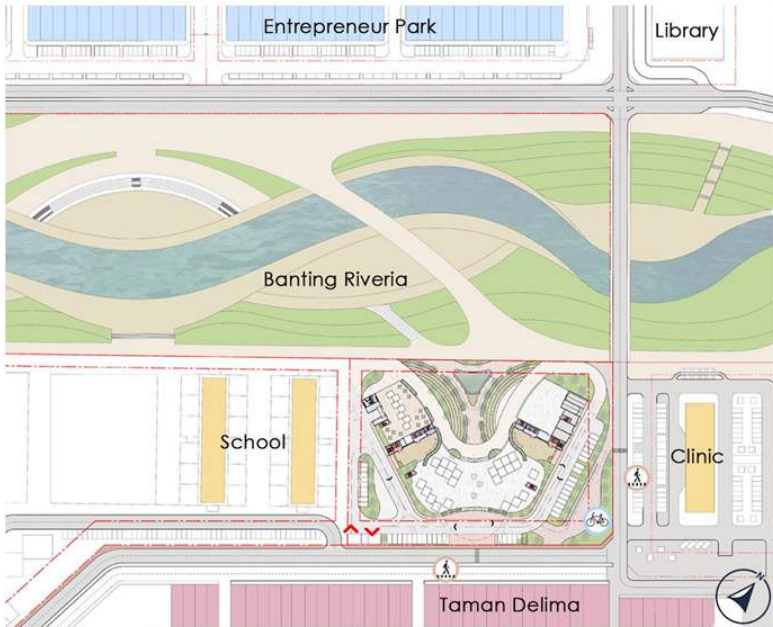


Variety unit Option & Local opportunity

Attracting densification of population to stimulate local economy.

Pedestrian & Cycling Neighborhood

Butterfly park are designed in front the Banting Riveria to welcome our residents or guest and also serve as a transition space. Bicycle pathways are designed to access into the residential area from Banting Reiveria. Allow local resident to have a green option to cycle to work. Covered bicycle stops are designed for both public and residential usage. Resident park are located at the basement leaving 44 visitor parks to reduce the traffic flow on the ground floor level.



Strategic Orientation & Permeable

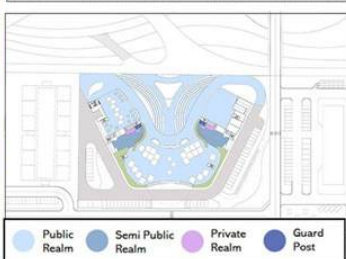
Facade

Does not block out the view from Taman Delima. Relieved green spaces on façade improve pleasing skyline view

Ventilation & Sun Path Strategies

Volumetric open space on ground floor level allow cross ventilation happen to passively ventilate the activity space.

Sun shade devices are install along the sun path to shade Bedrooms from hot sun



Public & Private Realm

Residence lift lobby is design separately from the public space with greeneries. Residence lift is guarded with guard post and a card accessed lift lobby. 3 Level of security level keeps a clear boundary between private and public



Ground Floor



L1-L2 Mezzanine floor



L3 Podium Level



Block A
L4 - L17 Resident level



Block B
L4 - L20 Resident level

1. Taman Delima

2. School

3. Clinic

4. Banting Riviera

5. Main entrance

6. Community Market

7. Hydroponic Pond

8. Butterfly Farm

9. Food Court

10. MPH

11. Resident lobby

12. Bicycle Stop

13. Pedestrian way

14. Basement Park

15. Service room

16. Common area

17. Pool Lounge

18. Wading Pool

19. Shower Room

20. Management

21. Nursery

22. BBQ Area

23. Play Ground

24. Surau

25. Play Lounge

26. Gym Room

27. Outdoor GYM

28. Resident's
Urban farm

Community Market

Vegetables and fruits from urban farm are sold in the market. Daily items like groceries and clothes are open to the public to improve local socioeconomics. Multipurpose hall are designed to cater community activities and are open for public usage if no activity are conducted.

MPH

Community Market

Food Hall



6



8

Urban Farm

Butterfly Park

Hydroponic Pond

Butterfly Park

Butterfly farm with varieties of local flowers are planted to attract butterflies to come over. Butterflies play important role in plant pollination and helps the urban vegetations to grow better. Hydroponic methods are also practice on the pond with fishes. Introducing Fishes and butterflies in the garden have create a small healthy ecosystem that brings humans closer to nature

New Generation Lifestyle

Smaller units are designed for Single lifestyle routine and are compensate with nearby common spaces and facilities such as workstation, lounge and food court.

Working Station

Leisure Lounge



Green Corridor

Nursery

Playground

Shared Spaces

Shared spaces are designed at almost every floor level with facilities, open space concept and integrate with natural elements . Residents and children can spend more time together with neighbor. Outdoor plant species tour or butterfly tour will be very pleasing activity for the resident



Type A
183 ft²
3 x 2.4m²
25 Units



Type C
920 ft²
14 x 2.4m²
87 Units



Intermediate
Type



Type B
377 ft²
6 x 2.4m²
50 Units



Type C1
900 ft²
15 x 2.4m²
40 Units



Corner
Type

Unit Percentage

10%

Type A

20%

Type B

50%

Type C

20%

Type D

Modular Infill unit

Customizable infill unit with 2.4m multiplication size option to suit usage. Prefabricated component minimize damage to site and surrounding neighbourhood. Steel structure can ensure quick completion, cost efficiency and environmentally friendly compared to conventional deep piling.



Type D
1100 ft²
15 x 2.4m²
52 Units



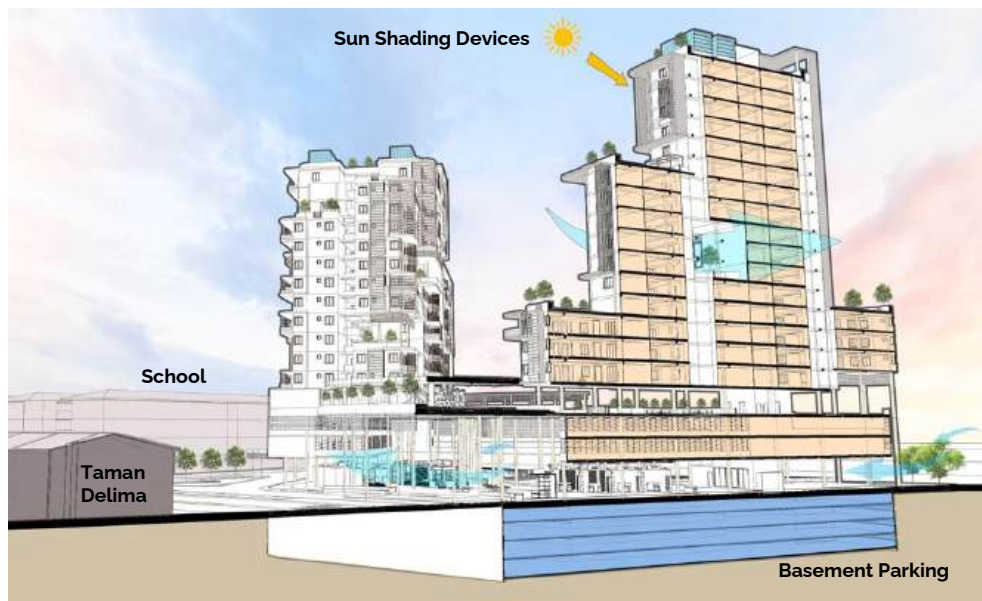
Intermediate
Type



Type D1
1120 ft²
18 x 2.4m²
5 Units



Corner
Type



Green Energy

Solar panels are installed on roof levels to harvest sunlight to light up street lamps

Green Roof

Minimize the heating into the residential units
Sun shading devices are installed to block hot sunlight especially from the evening sun

RainWater Harvest

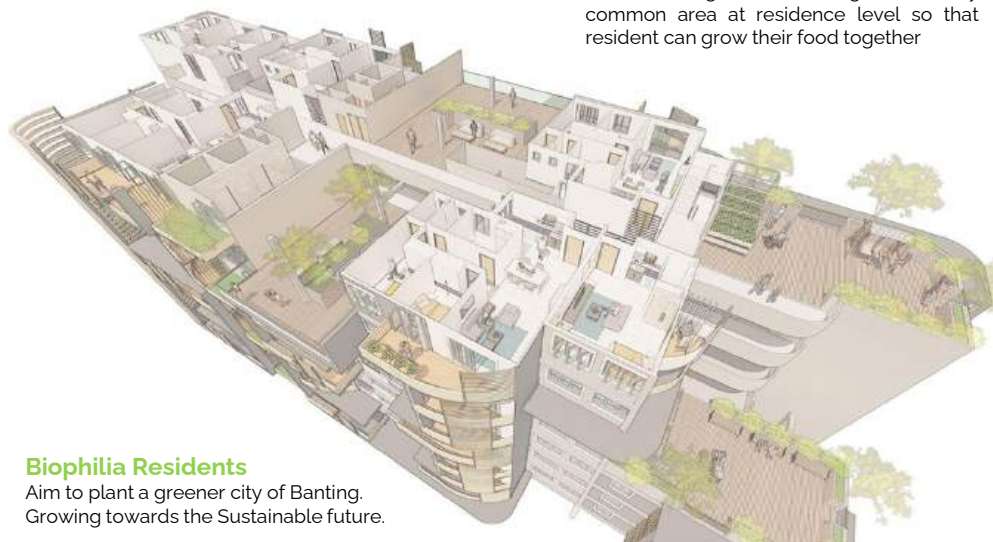
Rain water are harvest into a tank for plant irrigation purpose

Natural Ventilation

Big volume space and open concept allows cross ventilation to occur in the building

Residential Urban Farming

Urban farming tools are designed at every common area at residence level so that resident can grow their food together



Biophilia Residents

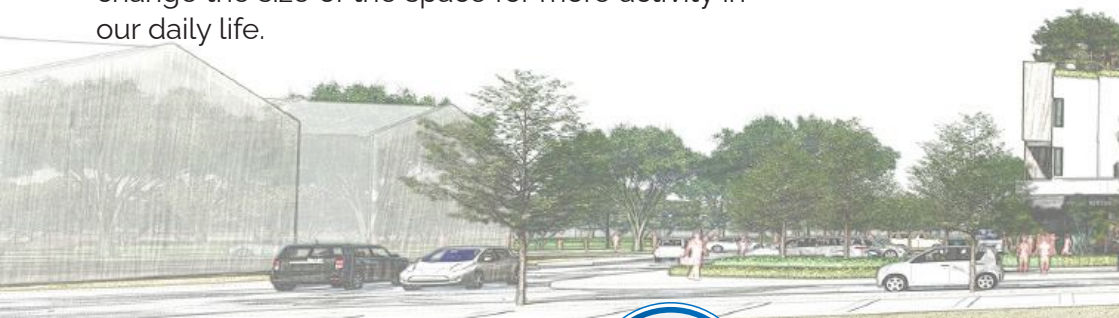
Aim to plant a greener city of Banting.
Growing towards the Sustainable future.

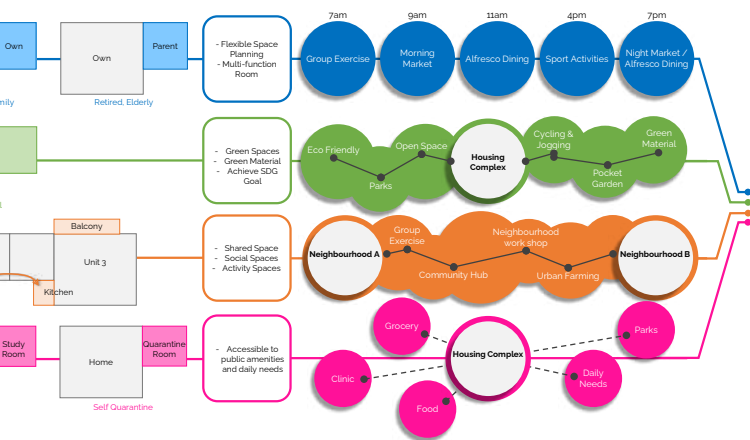
Flexi Home

Wong Yoong Sheng

Due to increase of population, spaces become limited in current situation that affected our daily life. Size of housing unit now day can't meet our daily activities and usage of space or room in our housing unit only serve us not more than one third of the day. Intention to rearrange the housing unit to maximise the rate of usage and create more bigger space with the limited space of housing unit.

Flexi Home designed to fit all necessary needs in our daily activities. An open plan concepts using mobile furniture to create room compartmentation and the mobility of furniture change the size of the space for more activity in our daily life.

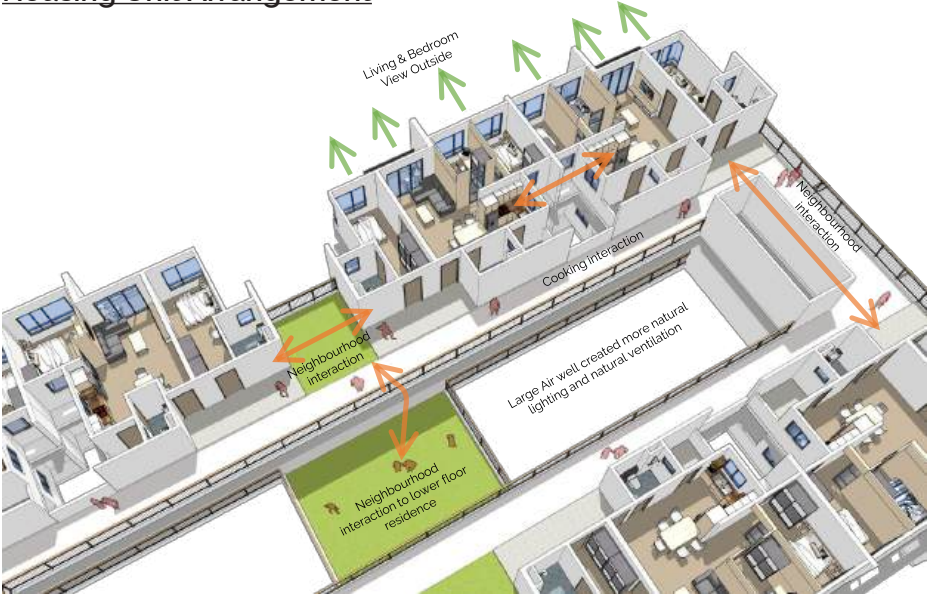




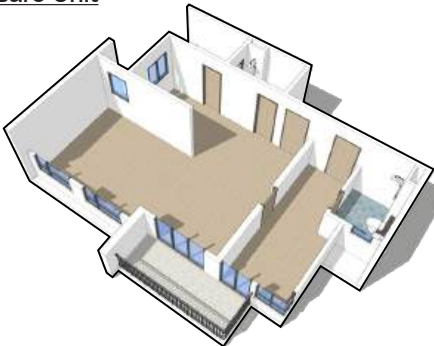
"Flexi Home"

Flexi "Flexible" defined as able to be **easily modified** to respond to altered circumstances. Home defined as a **place where one lives permanently**, especially as a member of a family or household. Flexi Home is a new home concept that can be change easily to meet all necessary change in the future and **create a better living** to our next generation.

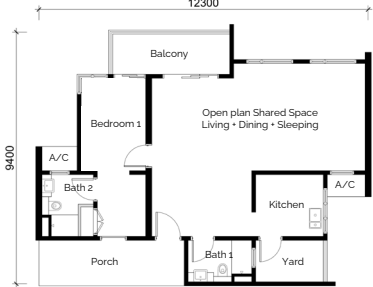
Housing Unit Arrangement



Bare Unit



Normal Mode / Night Mode



- Open plan concept

 - Owner are freely to plan their needs on furniture layout

Construction

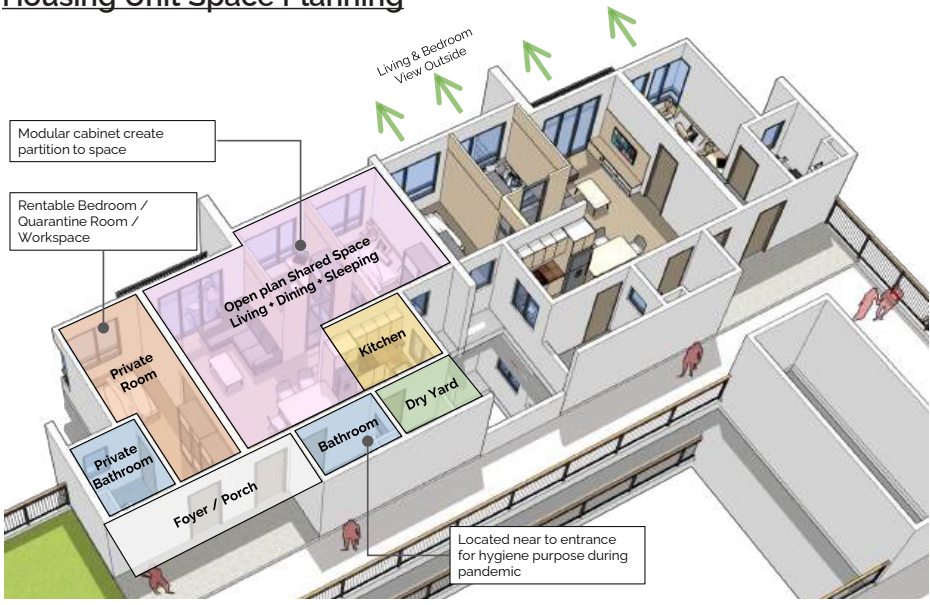
 - Minimize dead load, minimize structure and construction cost

- Normal / Night Mode

 - The normal design for the housing unit are 3 bedroom and 2 bathroom
 - Owner are freely to design their unit on their needs



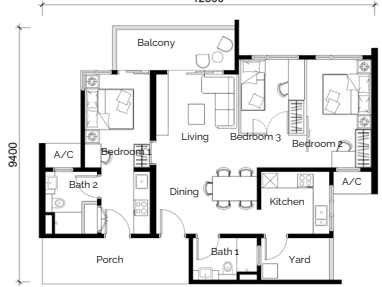
Housing Unit Space Planning



Party Mode



Quarantine / Renting / Parents Mode



Small Gathering Mode

- The modular furniture close up to create bigger living space for party activities



Renting / Quarantine Mode

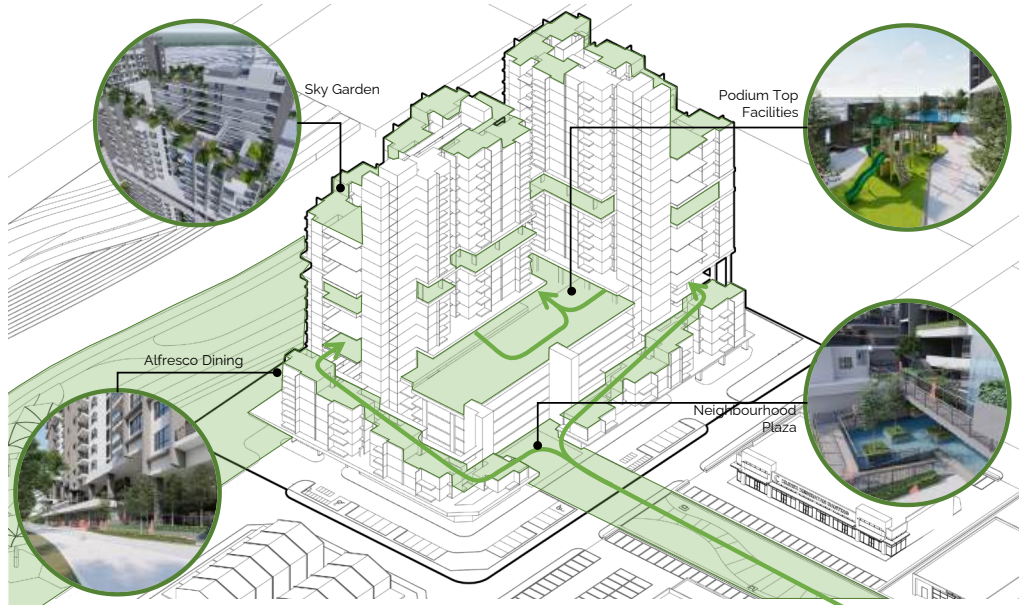
- Dual key unit to generate income from renting
- Quarantine room during pandemic
- Parents room that family stay together and provide privacy space



Proposed Housing Typologies

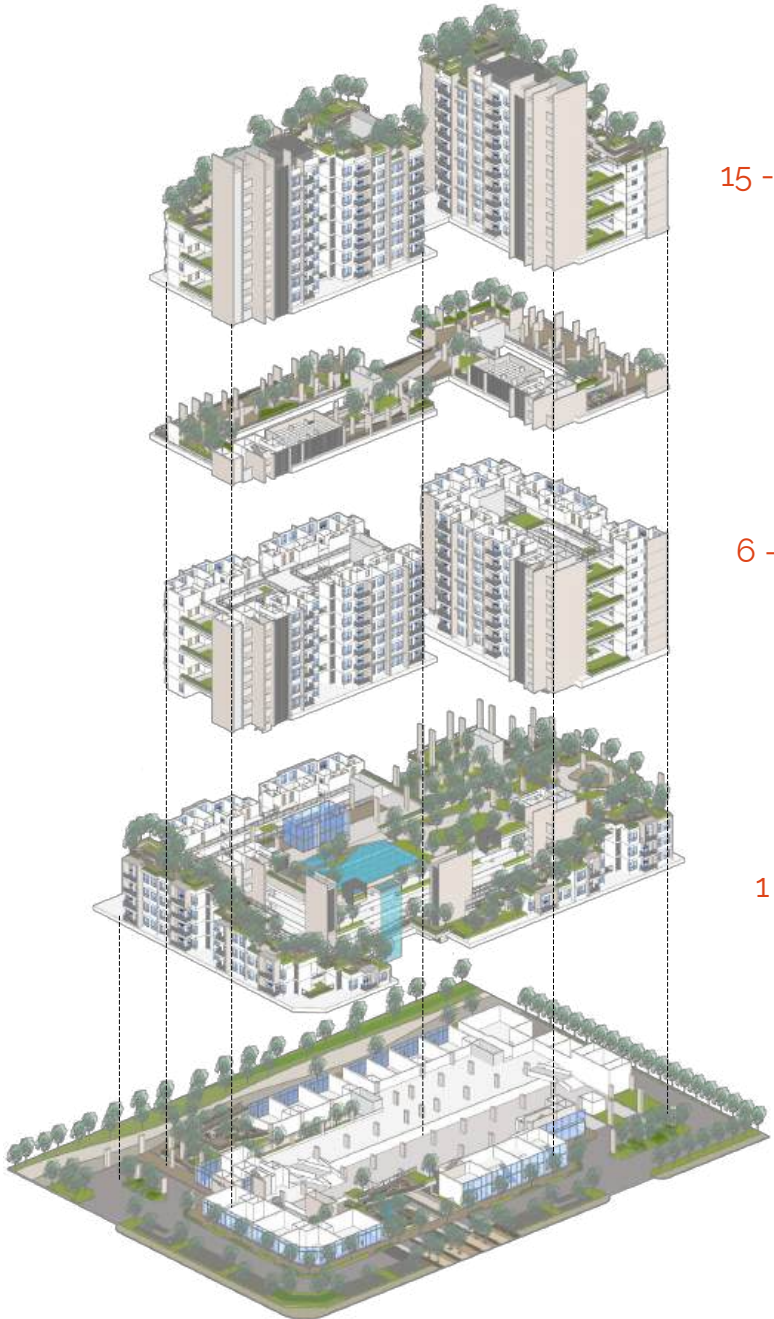


Proposed Open Space



Proposed Open Space - **96%** of Proposed land area

Proposed Housing Scheme Program



R - Domestic Water Tank
- Walk-Up Garden

15 - 24 - Housing Unit
- Pocket Garden

14 - Pocket Garden
- Co-working Space
- Study Space
- Games Corner
- Outdoor GYM
- 2nd Stage Pump & Tank Room
- Rainwater Harvesting Filter & Tank

6 - 13 - Housing Unit
- Pocket Garden

5 - Infinity Pool
- GYM
- Children Playground
- Urban Farming
- Neighbourhood Facilities
- Housing Unit (Disable)

1 - 4 - Housing Unit (Disable)
- Car Park
- Walk-Up Garden
- Pocket Garden

G - Retail
- Drop Off
- Neighbourhood Plaza
- River Front Avenue
- Car Park
- Walk-Up Garden
- M&E Services

B - Car Parking

Perspective



Neighbourhood Retail



Neighbourhood Plaza



River Front Avenue



Children Playground



Infinity Pool

Perspective



Neighbourhood Plaza



Tower B Drop Off



Night Front View



Tower View



Scan for YouTube Link
Video Presentation

Active Corridor Living

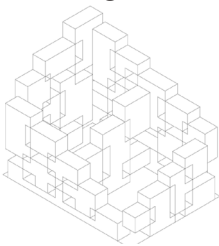
Yen Wei Zheng

Concept

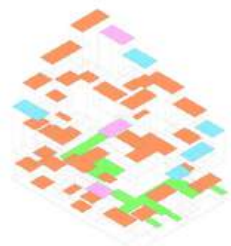


This neighbourhood housing scheme emphasize on active corridor as an extended living area. It has a vision to provide responsive and flexible spaces that enhance the quality of life. The idea of having people socialise outside of the unit have potential to help redefine housing unit especially affordable house - just keep what we need (essential spaces), but what we want we can share within the community. So the idea is to promote socialise outside the unit where community bond can happen.

Strategies



Cascade massing to connect different level into a corridor



Inject social outdoor space



Internal Circulation



Mix and diverse social program

Site housing issue & Existing Rumah Selangorku characteristic



Flexible Living

- Not rentable to generate extra income
- Not multifunction space
- Fixed plan

Social Interaction

- Social isolation and loneliness
- Limited interaction with neighbour
- Limited interaction space

Post Pandemic Living

- Not suitable convert to quarantine room
- Not suitable convert to study room or WFH

Unit Type B (70m² / 750ft²)



Single families Or
Cohabitation



Nuclear
families



The unit type B is suitable for smaller numbers of family members like cohabitation, single families and nuclear families. This housing typology is compact living, we focus social activity outside the living area. Type B unit has optional layout for conversion into a Work From Home station or to add-on 1 room for growing families.



Unit Type C2 (84m² / 900ft²)



Extended
families

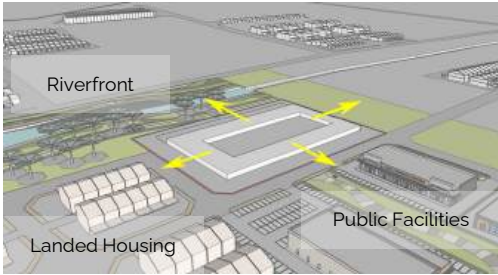


- Dual key option
- Can be use for self quarantine
- Can rent out when not in use
- Optional for conversion

Unit Type C2 has a larger foyer for neighbours to sit down and chit-chat during tea time. The green foyer also prompt spontaneous meeting amongs neighbours and encourages them to greet or exchange words for better community bonding. Kids can play along the corridor while parents or grandparents watch over them at their green foyer seat, thus creating a vibrant corridor.

Design Process & Strategy Diagram

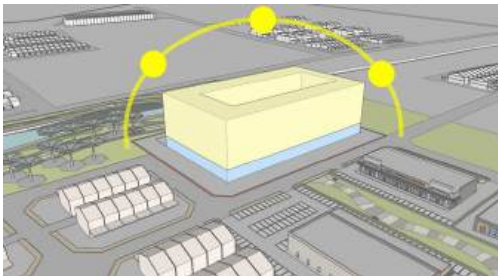
Climate / Site Response



The **footprint** is formed from the perimeter for surrounding views. Services and activities can be covered up for privacy.



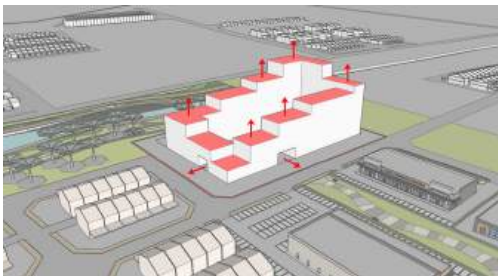
Internal courtyard and public plaza are introduced to connect the residents into the commercial boulevard and riverfront. The **green link** is also connected with the **green spine** of the neighbourhood.



Split level carpark podium and the private dwelling are **shield & shaded** from direct sunlight. The retail are on the ground floor for the neighbourhood and the residential are stacked on top.



The building is **cascading** in responding to the adjacent single & double storey terrace housing. **Continuing** the site context flow.



Building mass is stacked into hierarchy and **inject shared space** on the open roof area. An array of community activity are connected level by level and the views can be maximize.



Pocket gardens and sky lounge act as a **tranquil third spaces** for the residence. The openings also help shave down the bulky massing and make it more **breathable**.





Public Plaza + Pocket Green



Pedestrian Entrance



Over looking Alfresco



Alfresco



Social Program: Neighbourhood Farming



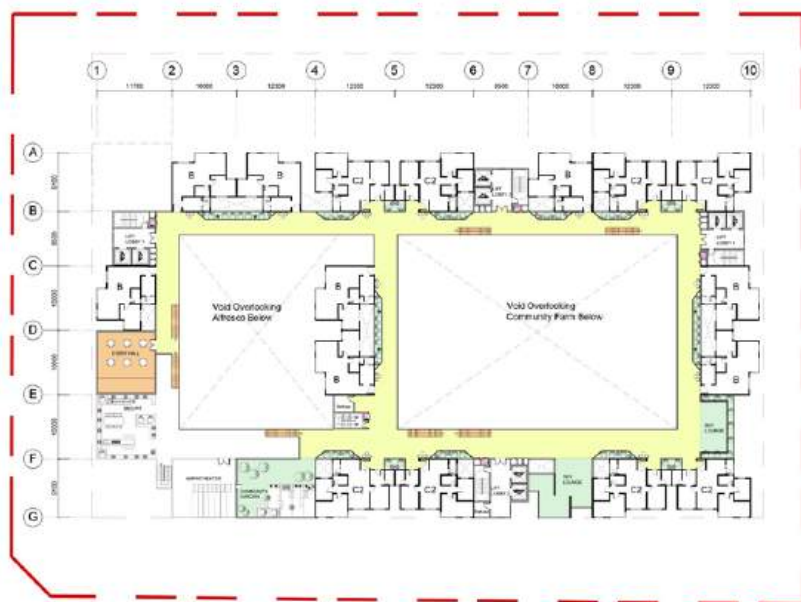
Social Program: Amphitheater



Neighbourhood Farming + Seedling Incubation



Neighbourhood BBQ Pit



Typical Floor Plan



Social Program: Connecting into a corridor



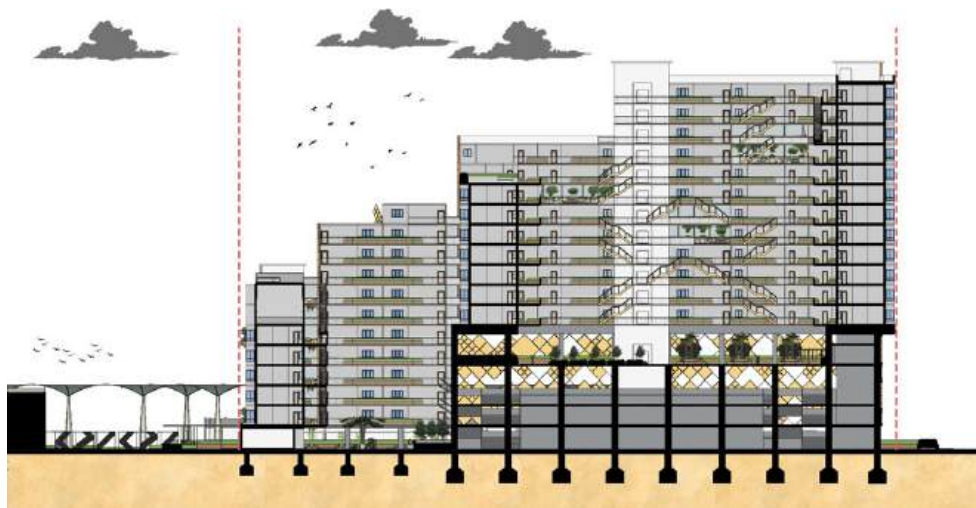
Social Foyer & Corridor



Social Program: Event Hall Access



Staircase connection



The building is incorporate with a series of **vertical planters, green balconies and sky gardens** to protect the building from the sun.

The trees help **filter sunlight, reducing glare, providing shade** to the building to prevent surface area expose to heat absorption.

These sky gardens also improve the microclimate, the double & triple volume sky terrace **boost natural air ventilation** to optimize heat exchange while keeping the energy consumption at minimum. The plants are irrigated using water from the **harvesting tank**.



The green features of sky gardens act as '**lungs**' to create **greater natural air movement** with openings for **cross ventilation**. These natural cooling system allows the development to minimize on their **overall energy consumption**.