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SELANGOR STATE STRUCTURE PLAN (SSP): A WAY FORWARD TO 2035

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ABSTRACT

State Structure Plan (SSP) is a document that prepare a planning framework that will guide and control the state's physical development as required under the Town and Country Planning Act 1976 (Act 172). The study area is the Selangor State, located on the west coast of Peninsular Malaysia. This study adopts the process of state structure plan preparation in accordance to PlanMalaysia's Manual. The development concept proposed in the plan is "Interdependent Polycentric Economic Region", defined as economic corridor

and growth centres that are depending on one and another. There are 5 development thrusts with 32 policies that are being proposed. From the policies, a total of 9 high impact projects being proposed for the state of Selangor.

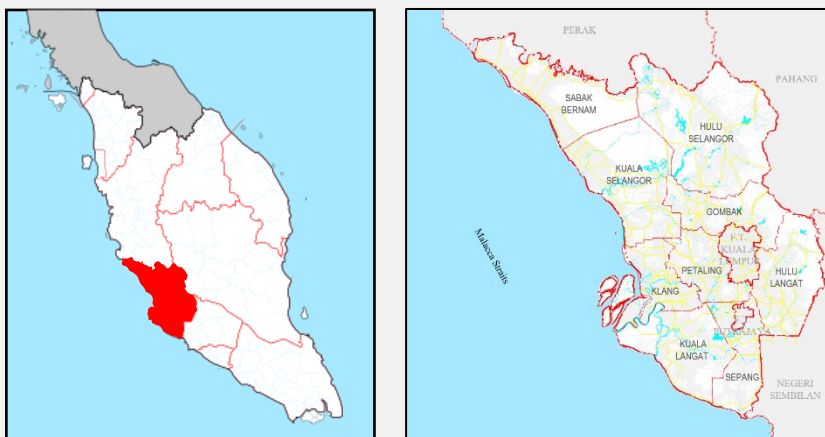
Keyword: *structure plan, development plan, planning system, Selangor, Interdependent Polycentric Economic Region.*

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INTRODUCTION

State Structure Plan is a document that prepare a planning framework that will guide and control state's physical development. This is stated in Act 172 Section 8 Town and Country Planning Act. The current Selangor State Structure Plan 2035 had been gazetted on 2 February 2017. It had outlined 60 new policies which based on 3 Thrusts. It is being reviewed to align state's development plan with the new policies that had been implemented at the national and international level.

Selangor is located on the west coast of Peninsular Malaysia bordered by Perak to the north, Pahang to the east, Negeri Sembilan to the south and Straits of Malacca to the west. The Federal Territories of Kuala Lumpur and Putrajaya is within the state. Selangor, also known as Darul Ehsan which means "Abode of Sincerity" is one of the 13 states in Malaysia. There are 9 districts in Selangor which are Gombak, Klang, Kuala Langat, Kuala Selangor, Petaling, Sabak Bernam, Sepang, Hulu Langat and Hulu Selangor (Maps 1&2).



Maps 1 & 2: Location Plan of Selangor

METHODOLOGY

Figure 1 below depicts the process and stages involved in the preparation of a State Structure Plan.

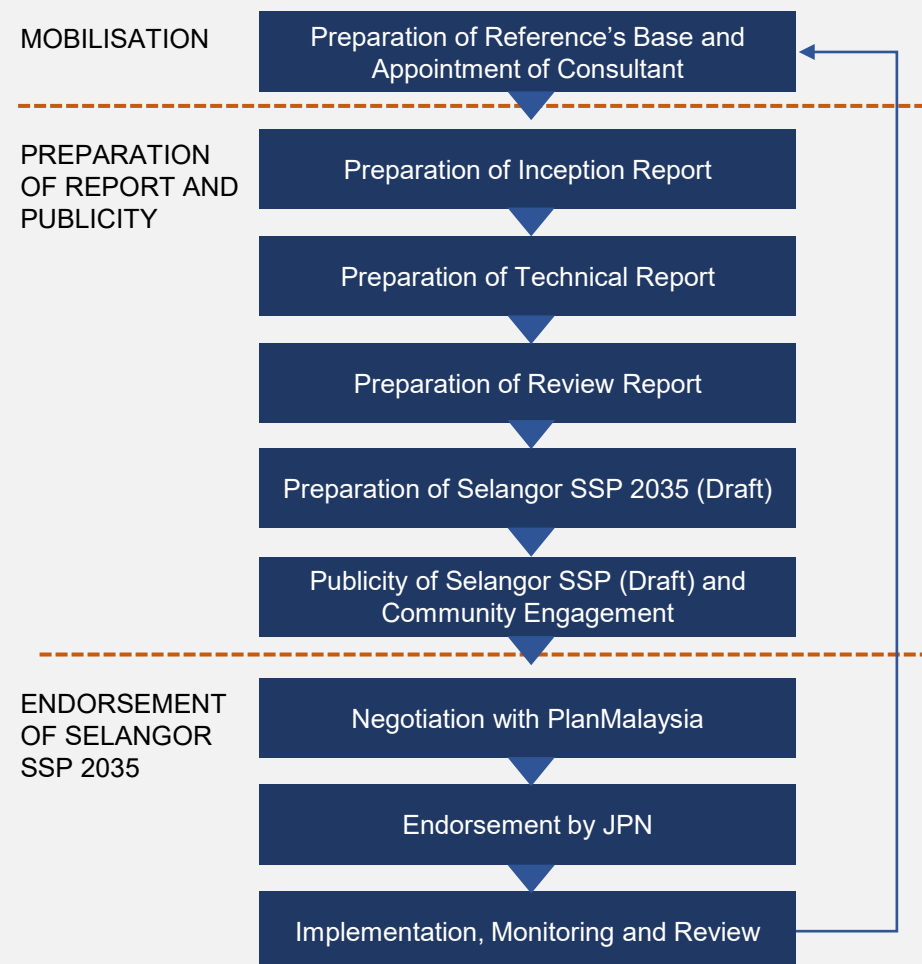
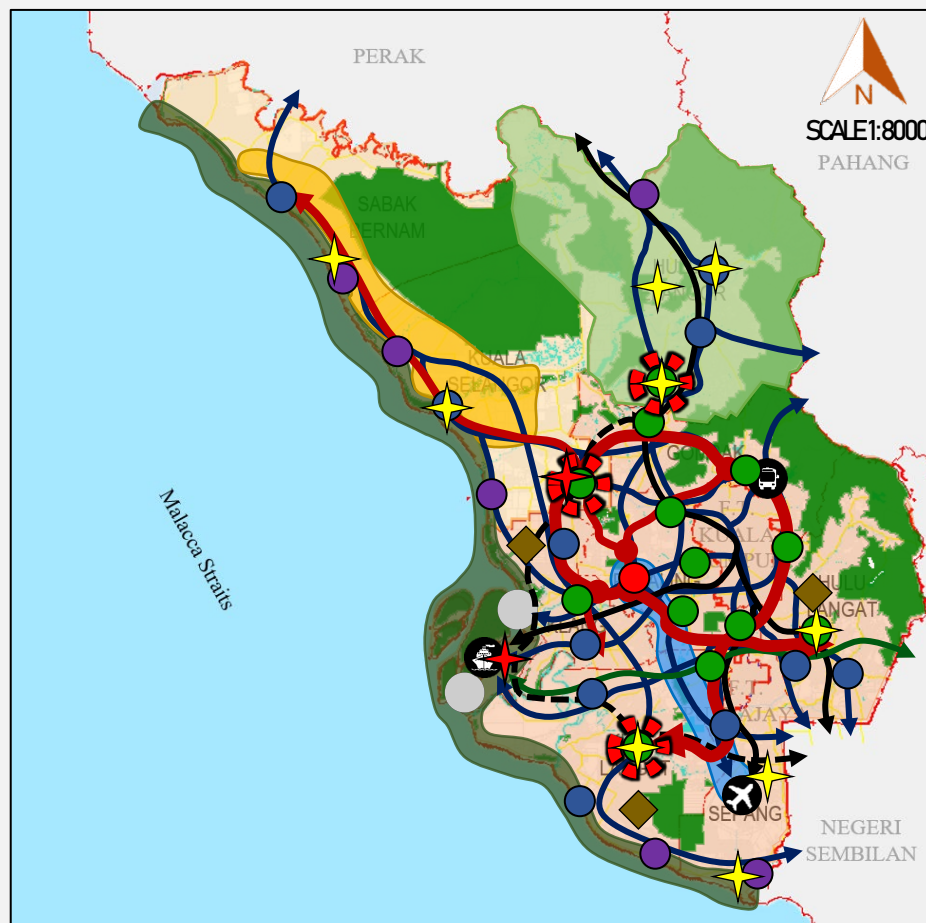


Figure 1: Flow Chart Process on the Preparation of State Structure Plan

DEVELOPMENT CONCEPT



Legend					
	Boundary		Existing Road Networks		Existing Rail Networks
	Proposed Public Transport		Proposed Rail Networks		ECRL
	Seaports		Airports		Transport Hub
	Proposed Transport Hub		Proposed Infrastructure		Tourism Nodes
	State Growth Centre		Major Growth Centre		Major Settlement Centre
	Small Settlement Centre		New Growth Centre		Water Bodies
	MICE Corridor		Marine Management Corridor		Permanent Agriculture Zone
	Selangor Eco-Region				

Map 4: Development Concept of Selangor State Structure Plan 2035

INTERDEPENDENT POLYCENTRIC ECONOMIC REGION

The Interdependent Polycentric Economic Region as the economic corridor and growth centres are depending on one and another. Each corridors and centres have different economic focused that support other economic sectors directly and indirectly.

This concept is suitable for this state with its strategic and geographic location to the sea, local resources and the capital city of Malaysia. Therefore, the plan of spatial development in this state are divided into two main components; Greater Kuala Lumpur Conurbation (GKL Conurbation) and Outer Greater Kuala Lumpur Conurbation (OGKL Conurbation).

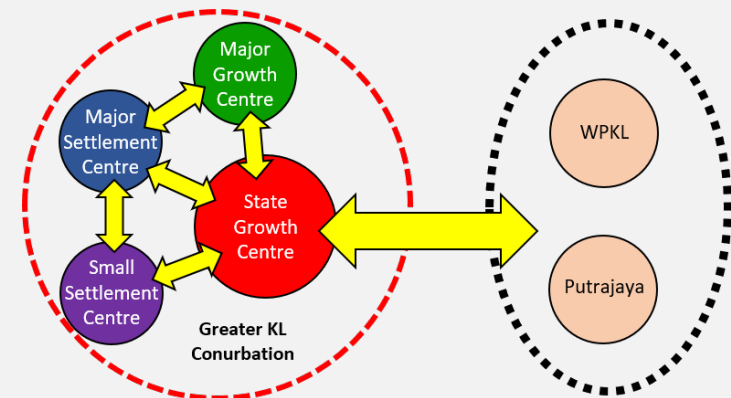


Figure 7: Development Concept of Greater KL Conurbation

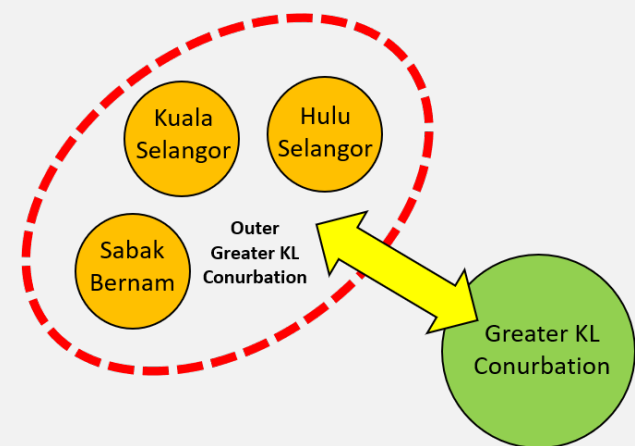
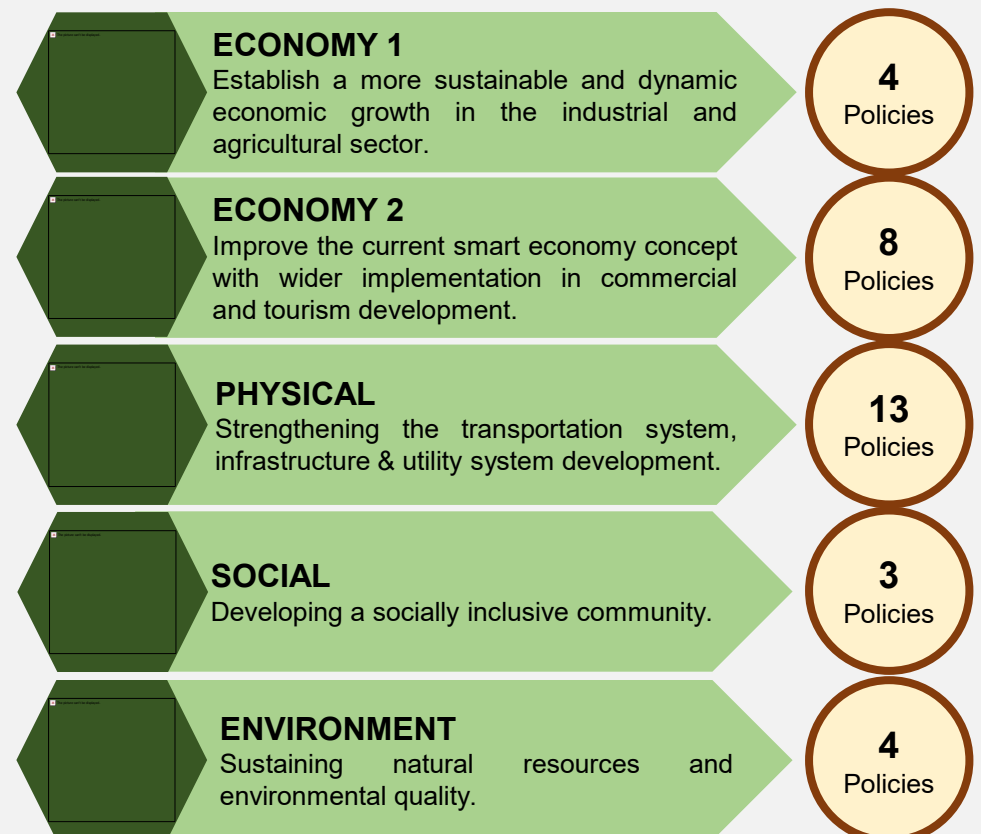


Figure 8: Development Concept of Outer Greater KL Conurbation

DEVELOPMENT THRUST



PROJECT FINDINGS

HIGH IMPACT PROJECTS 1 & 2: AGRO-INDUSTRY CORRIDOR & E-COMMERCE FULFILLMENT CENTRE

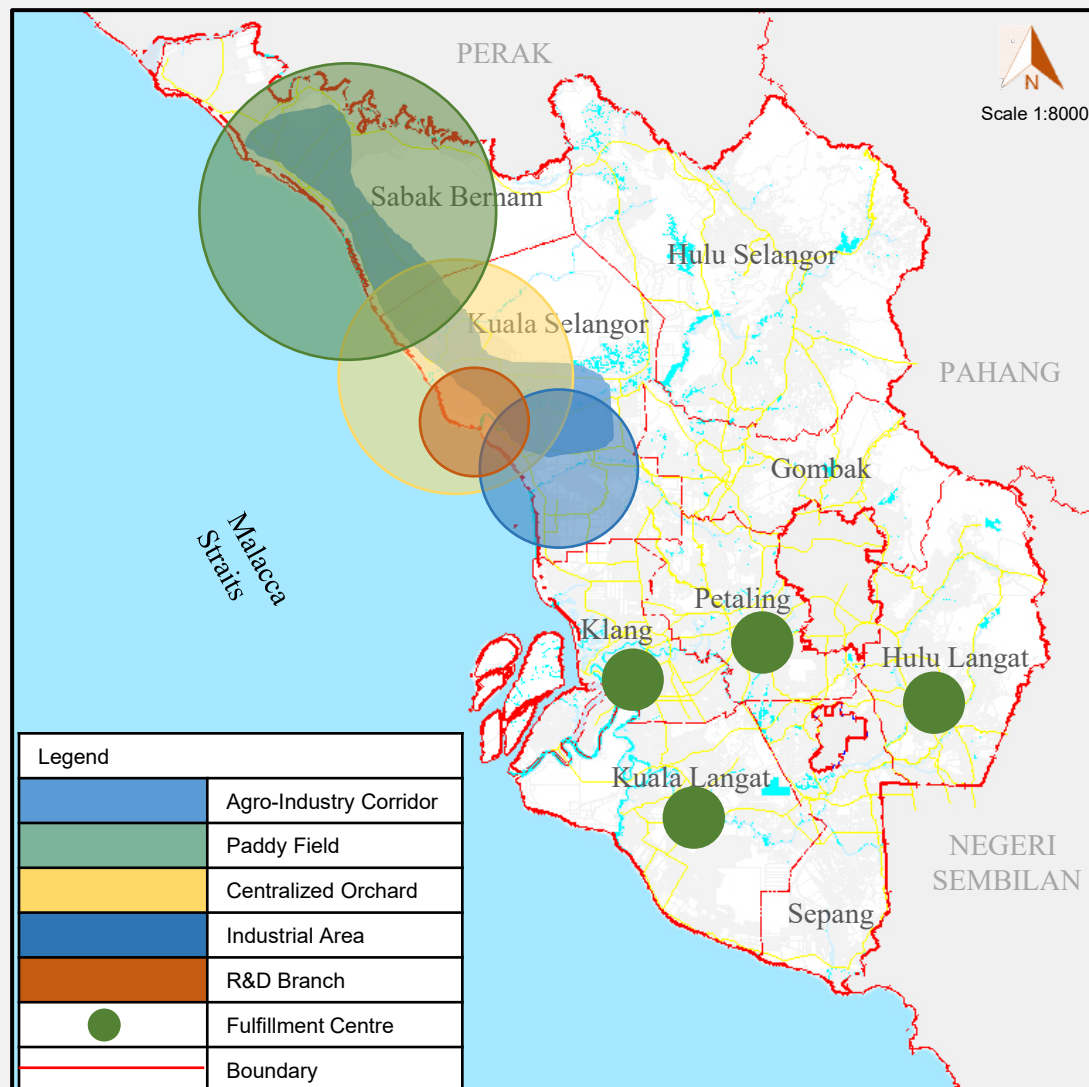
These projects are based on the major findings from review of the current development scenario in Selangor and Malaysia:

- About 0.7% of Selangor's number of household have income below the poverty line.
- Aquaculture products are located all along the coast of Klang, Kuala Selangor and Sabak Bernam.
- As of 2017, Selangor stands the third highest for online banking and buying after Kuala Lumpur and Putrajaya.
- Selangor is the 3rd largest contributor to the paddy and rice production in Malaysia with 10.8%.

Related Policies to help Selangor State future development:

RSB 1: Improving the productivity of industrial and agriculture activities to increase the GDP contribution of the State.

RSB 5: Improving E-commerce facilities to cater and support future commercial demand and transaction.



Map 3: Proposed location for Agro-Industry Corridor and E-Commerce Fulfillment Centre

COMPONENTS IN E-COMMERCE FULFILLMENT CENTRE



Figure 2: Example of Fulfillment Centre (Source: Bulger S., 2017)

The 3rd Party Fulfillment Model



Figure 3: The Model Of Fulfillment Centre. (Source: Finance Online, 2020)

COMPONENTS IN AGRO-INDUSTRY CORRIDOR



Figure 4: Hydroponic Farms (Source: Nosowitz D., 2017)



Figure 5: Centre or Branch Office (Source: Askew K., 2019)



Figure 6: Centralized Orchard (Source: Wani R., 2019)

HIGH IMPACT PROJECT 3: TOURISM PROJECTS

The projects are based on the major findings:

- Selangor has the highest domestic tourist receipts which are about RM 13.2 billion.
- Accommodation is under-capacity to cater for tourists demand until 2035.

Related Policies:

RSB 10: Promoting coastal and urban tourism products and activities to attract intrinsic and extrinsic tourists.

RSB 9: Preserve and strengthen the eco, agro and heritage tourism products and to raise public awareness, and maximizing the revenue of tourism sector.

MORIB WATERFRONT RESORT

Seeing the potential of Morib Beach, it will be developed to fulfill the tourists demand activities:

- Sailing activities
- Fishing
- Boardwalk
- Sunset lounge

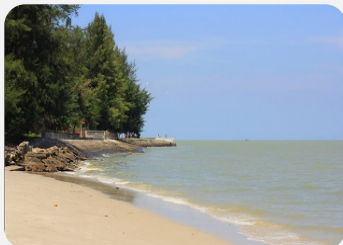
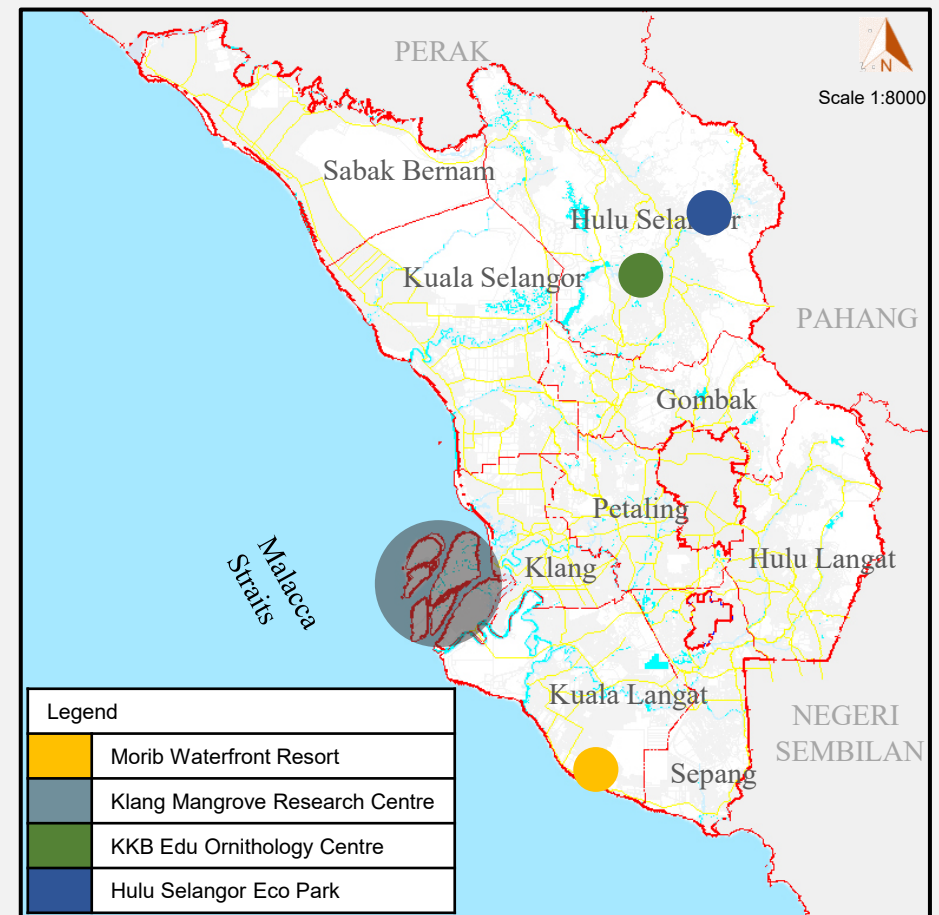


Figure 9: Existing Site



Figure 10: Proposed Waterfront on Site



Map 5: Proposed location for Tourism Projects

HULU SELANGOR ECO PARK

Mining land in Rasa, Hulu Selangor was abandoned, hence to strengthen Hulu Selangor as Selangor Eco Corridor, the ex-quarry can be transformed to Eco National Park. Redevelopment is proposed to make sure that the ex-quarry will not pollute the environment.



Figure 11: Existing Site



Figure 12: Proposed Waterfront on Site

(Source: Tourism Perak, 2020)

KKB EDU-ORNITHOLOGY CENTRE

The bird watching and bird annual competition events held in KKB received the tourists from more than 30 countries. KKB Edu-Ornithology Centre will preserve habitat of birds in Kuala Kubu Bharu. To preserve and strengthen the ecotourism, KKB Edu-Ornithology Centre is one of the initiative to raise public awareness as well as maximize revenue in tourism sector.



Figure 13: Birds Flying Zone (Source: Jabatan Perancang Bandar & Desa Selangor, 2010)

Focusing on eco-edu tourism, Edu-Ornithology Centre is a branch of zoology that concern the study of birds, KKB Edu-Ornithology Centre strives for original research in behavioral ecology, conservation, education and strengthening and promoting annual events such as bird watching and bird competition.

HIGH IMPACT PROJECT 4: NEW SELANGOR INTEGRATED TRANSIT SYSTEM

The projects are based on the following major findings:

- The projected population of Selangor will reach a total of 9 million by the year 2035.
- 67.68% of the total area of Selangor can be developed without any constraints.
- All districts are well connected with expressways and road networks.
- The current modal split in 2015 is about 25% public transport users and 75% private transport users.
- The average growth rate of public transport users was about 1.9%, from year 2008 to 2015.

Related Policies:

RSB 13: Improve the transportation infrastructure in urban and rural areas in Selangor to support economic development and people's welfare.

RSB 14: Strengthen the infrastructure of seaport and airports in Selangor as ASEAN Transport Hub.

This proposed project includes several new transit lines around Selangor. It consists of Light Rail Transit (LRT), Bus Rapid Transit (BRT), KTM Railway and realignment of East Coast Railway Link (ECRL) and two Integrated Transit Terminals (ITT). The new integrated transit system will use the circle-radial system. The circle system will circulate around the urban area while the radial system will connect other places from the circle system.



Figure 14: Proposed Northern ITT @ Puncak Alam (Source: WesternWilliamson+Partners, 2020)



Figure 15: Proposed International Harbour Gateway @ Pulau Indah (Source: WesternWilliamson+Partners, 2020)



Legend			
	Roads		KTM Lines
	Boundary		ECRL
	BRT Lines		Interchange Stations
	LRT Lines		Integrated Transport Terminal

Map 6: Proposed New Selangor Integrated Transit System

Components:



2 LRT Lines



6 BRT Lines



3 KTM Lines

HIGH IMPACT PROJECT 5: WASTE-TO-ENERGY

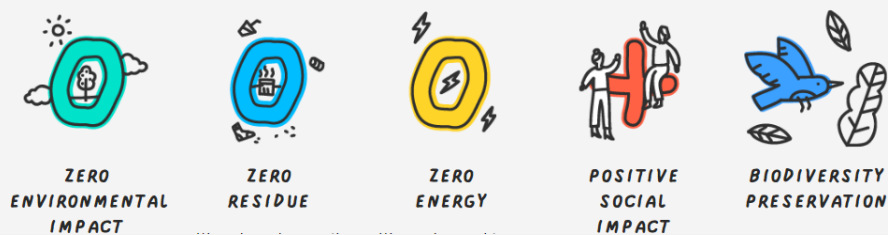
This projects are based on the following major findings:

- Electricity supply is enough to accommodate demand until 2035.
- Every districts in Selangor is connected to at least one internet service provider in 2019.

Related Policies:

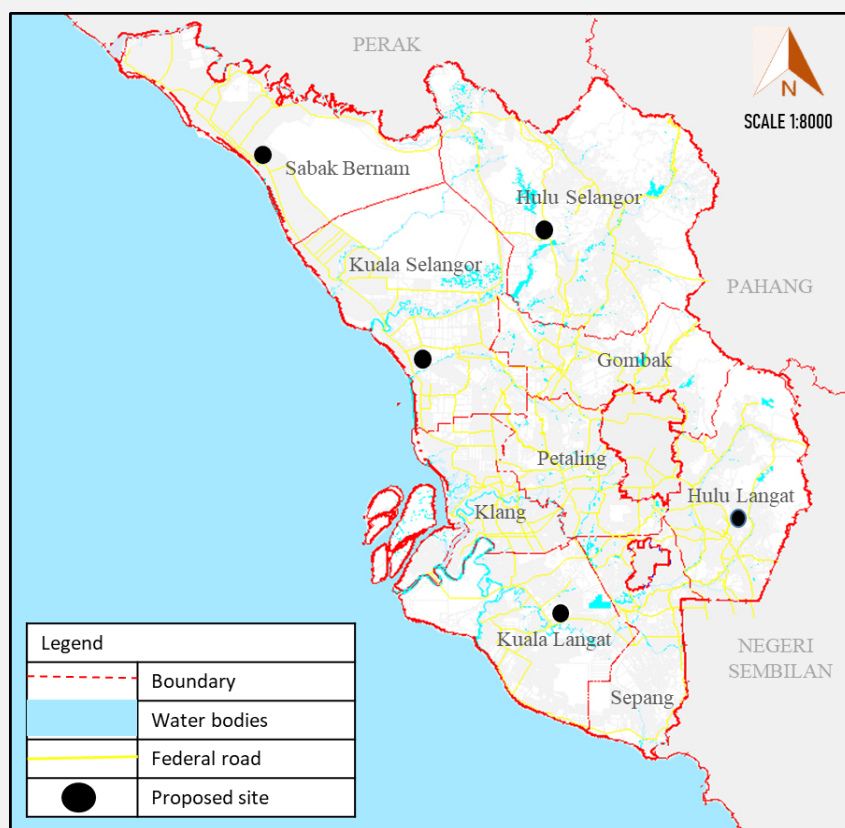
RSB 18: Provide adequate and reliable infrastructure and utility system to meet the existing and future demand of population.

RSB 19: Diversify sources of the energy supply system to meet the economic output and reduce the dependency on non-renewable energy.



BIOFACTORIES PROJECT will produce 110,000 tonne of fertilizer yearly and 120 K tonnes of gas for gas supply and energy generation.

- Convert 100% of sewerage to fertilizers (100 tonne) for 500 acres plantation.
- Reduce non-renewable energy dependency by 50%.



Map 7: Proposed Site of Biofactories



Figure 16: Proposed Biofactories (Source: Marchant, T., 2018)



Figure 17: Proposed Biofactories (Source: PULPAPERnews.com. 2020)

WASTE TO ENERGY PLANT (Biofactories) converts municipal and industrial solid waste into electricity or heat for industrial processing. It works by burning waste at high temperatures and using the heat to make steam. The steam then drives a turbine that creates electricity.

BIOFACTORIES diversify sources of the energy supply system and reduce the dependency on non-renewable energy. It reduces solid waste generation rate and improve the population accessibility to modern high technology STP.

Impacts

	<p>ENERGY SUPPLY INCREASED Produce 5 MW of the energy supply which covers 50% of electric supply system yearly. Reduce non-renewable energy dependency by 50%</p>
	<p>RECYCLE PROGRAMME Encourage implementation of Recycling programme at disposal site</p>

HIGH IMPACT PROJECT 06: IMPLEMENTATION OF SELF-HELP HOUSING PROGRAMME

The projects are based on the following major findings:

- The projected population of Selangor will reach a total of 9 millions by the year 2035.
- About 0.7% of Selangor's number of household have income below the poverty line.
- 67.7% of the total area of Selangor can be developed without any constraints.

Related Policies:

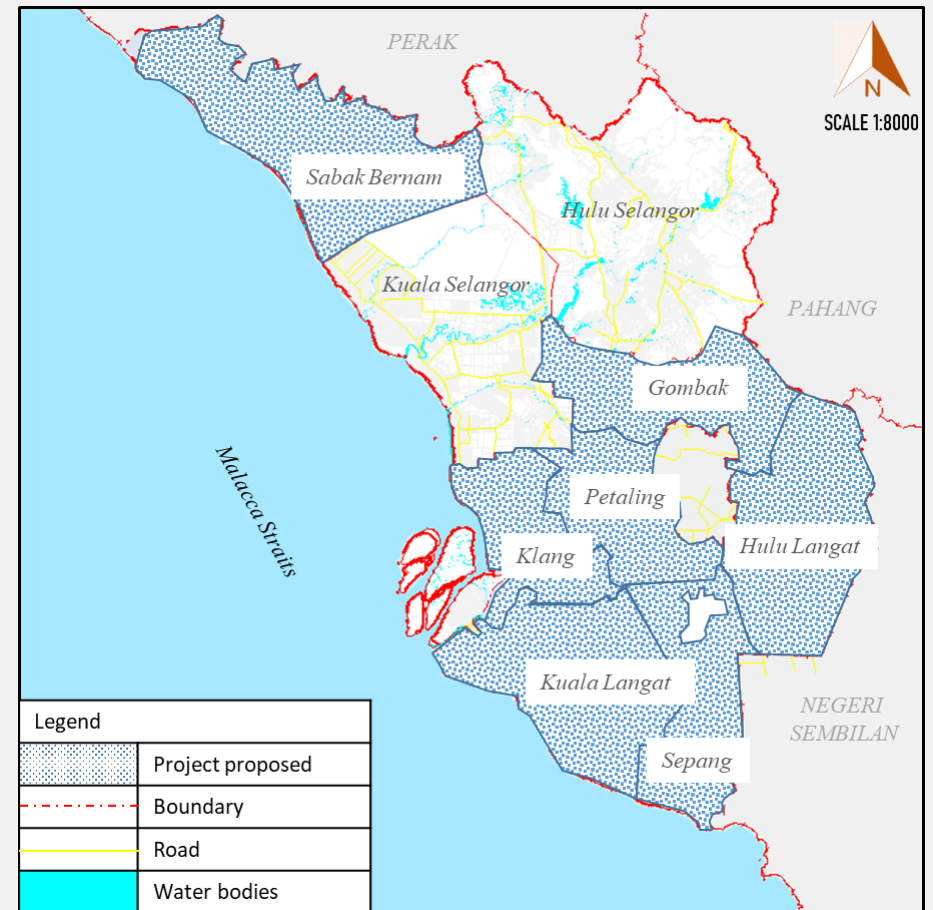
RSB 27: Providing sustainable and harmonious community living through the good quality of affordable housing and housing development.



Figure 18: Self-help Housing Programme Procedure

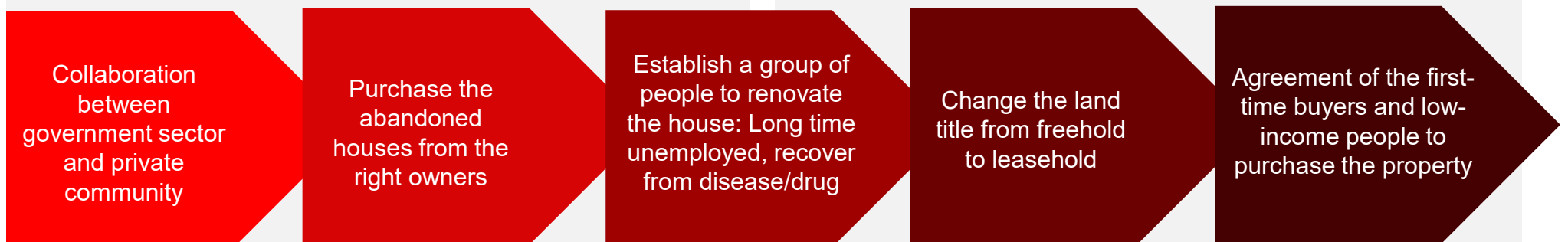
Self Help Housing Programme is a programme that focuses on reducing the number of abandoned housing to zero percent in Selangor in fifteen years span.

According to the various case studies, this programme has been conducted in many countries throughout the world. It shows that the efficiency of this programme in reducing the abandoned housing projects of the country (Riley, 2018).



Map 8: Proposed Sites of Self-Help Housing Programme

Components Of Self-help Housing Programme



CONCLUSION

The Selangor State Structure Plan 2035 prepared and gazette in 2017 had been reviewed to cater for the rapid development that had taken place in recent years. Selangor State has always been in the hub and fore-front of the new technological advancement in the country. Hence, a constant review, adjustment and improvement of the plan is important so to ensure Selangor stays relevance as well as in the leading role of the nation. The proposed *Interdependent Polycentric Economic Region Concept* is about each economic corridor and growth centres in the state are depending on one and another. Each corridors and centres have different economic focused that support other economic sectors directly and indirectly. This concept is deemed suitable for the state with its strategic and geographic location to the sea, local resources and the capital city of Malaysia.

ACKNOWLEDGEMENT

This project was carried out by a group of 3rd Year students (Planning Studio 5), Semester 1, 2019-2020. The project was to prepare a Selangor State Structure Plan. This studio project were under the supervision of Assoc. Prof. Dr. Abdul Azeez Kadar Hamsa, Prof TPr Dato' Dr. Mansor Ibrahim, Assoc Prof Dr Azila Sarkawin and Asst Prof Dr Irina Safitri Zen. Other members of the group led by Aaliyah Bajrai were Mohammad Ikhwan, Muhammad Akmal Hakim, Muhammad Alhakim, Muhammad Azmir Arif and Muhammad Murshid. The authors would like to extend their appreciation to PLANMalaysia Selangor for their cooperation.

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