

The future of seberang perai

The Eco – City of Batu Kawan aims was to create a sustainable city growth with highest social, economic and environmental quality of life to its residents. The development of Batu Kawan expected to be completed by 2030. The overall Eco – City of Batu Kawan will provided 200,000 residents with eco – friendly development.

9 keys element in the establishment of the Eco - City Batu Kawan concept has been implemented to made the Batu Kawan as growth centres to realise intention of state on Green - City, Eco - Friendly, green technology and low carbon emission development



Neighbourhood Unit 1
Approximate 1,340 acre

Housing Unit	6,728 Unit
Commercial Floor Space	5,865,354 foot ²
Golf Course	150 Acre

Neighbourhood Unit 2
Approximate 1,270 Acre

Housing Unit	17,673 Unit
Commercial Floor Space	17,725,435 foot ²
Infra/Institution	60Capacity

Neighbourhood Unit 3
Approximate 450 Acre

Housing Unit	2,142 Unit
Commercial Floor Space	153,331 foot ²
Stadium	40,000Capacity

Neighbourhood Unit 4
Approximate 870 Acre

Housing Unit	8,369 Unit
Commercial Floor Space	18,198,497foot ²
Industry	75 Acre
Infra/Institution	123 Acre

Neighbourhood Unit 5
Approximate 1,070 Acre

Housing Unit	10,493 Unit
Commercial Floor Space	4,450,961 foot ²
Industry	212 Acre
Infra/Institution	131 Acre

Neighbourhood Unit 6
Approximate 1,090 Acre

Commercial Floor Space	1,054,152 foot ²
Industry	753 Acre
Infra/Institution	7 Acre

Neighbourhood Unit 7
Approximate 600 Acre

Industry	393 Acre
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Guideline Preparation

MPSP has come out a comprehensive guideline on Eco-City Batu Kawan. Various technical agencies and stakeholders were also involved in preparing this guideline even though limited knowledge and experience in eco-city framework, endure hope creating better future for Batu Kawan.



Fundamental Concept



**Ecology
Preservation**



Accessibility



Safe City



**Zero
Renovation**



**Neighbourhood
Unit**



**Affordable
Housing**



**Solid Waste
Management**



**Green
Building**



**Green
Neighbourhood**

SUSTAINABLE DEVELOPMENT GOALS

<p>1 NO POVERTY</p> 	<p>2 NO HUNGER</p> 	<p>3 GOOD HEALTH</p> 	<p>4 QUALITY EDUCATION</p> 	<p>5 GENDER EQUALITY</p> 	<p>6 CLEAN WATER AND SANITATION</p> 
<p>7 RENEWABLE ENERGY</p> 	<p>8 GOOD JOBS AND ECONOMIC GROWTH</p> 	<p>9 INNOVATION AND INFRASTRUCTURE</p> 	<p>10 REDUCED INEQUALITIES</p> 	<p>11 SUSTAINABLE CITIES AND COMMUNITIES</p> 	<p>12 RESPONSIBLE CONSUMPTION</p> 
<p>13 CLIMATE ACTION</p> 	<p>14 LIFE BELOW WATER</p> 	<p>15 LIFE ON LAND</p> 	<p>16 PEACE AND JUSTICE</p> 	<p>17 PARTNERSHIPS FOR THE GOALS</p> 	 <p>THE GLOBAL GOALS For Sustainable Development</p>

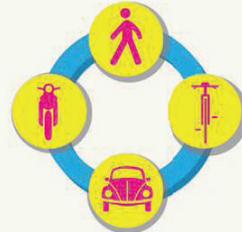
Meeting SDGs

Features	SDGs Achieved
Ecological preservation	
Accessibility	
Safe City	
Zero Renovation	
Neighbourhood Unit	
Affordable Housing	
Solid Waste Management	
Green Building	
Green Neighbourhood	



Ecology Preservation

Preservation will be the main focus as Batu Kawan comprises ecological areas and have to be preserved and maintained to ensure development are more harmonious and dynamic



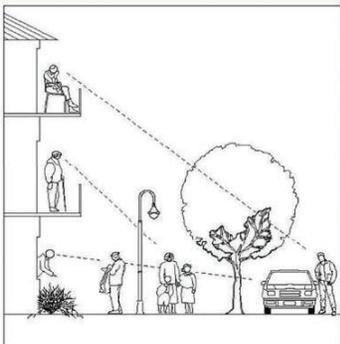
Accessibility

This concept will emphasize the balance between development and the environment that may contribute to the high quality of life and safety to form networks and green routes that connect and provide more green spaces in the neighbourhood, thus creating a continuous access through the provision of walking and cycling paths



Safe City

The security aspect is an important element in the planning process. Development using approach from Crime Prevention Through Environmental Design (CPTED) can greatly reduce crime in the neighbourhood. It also will encourage people to walk comfortably with a sense of security.





Zero – Renovation

This newly concept introduced will overlook building design to reduce the potential toward creating additional building expansion from the owners. With this concept, it will reduce environmental pollution and follow according to eco – city concept



Neighbourhood Unit

The concept of this neighbourhood will emphasis on the provision and also accessibility of the facilities which can be enjoyed by all resident



Affordable Housing

Providing affordable housing is one of the main outline at the state or even national level. Thus this component will play an important role for development carried out here, so it will be balanced and can be shared by every stages of residents





Solid Waste Management

To determine efficiency of management and level of cleanliness of a development, method of planning on providing infrastructure facilities must:

- Reduce carbon foot print
- Avoid pollution from leachate spill
- Diminish congestion in the city
- Encourage waste segregation at source
- Decrease waste produce or zero waste
- Increase Landfill life expectancy



Green Building

Building will be rates according to Green Building Index (GBI) using these 6 main criteria:

- Energy Efficiency (EE)
- Indoor Environment Quality (EQ)
- Material & Resources (MR)
- Water Efficiency (WE)
- Innovation (IN)
- Sustainable Site Planning & Management (SM)

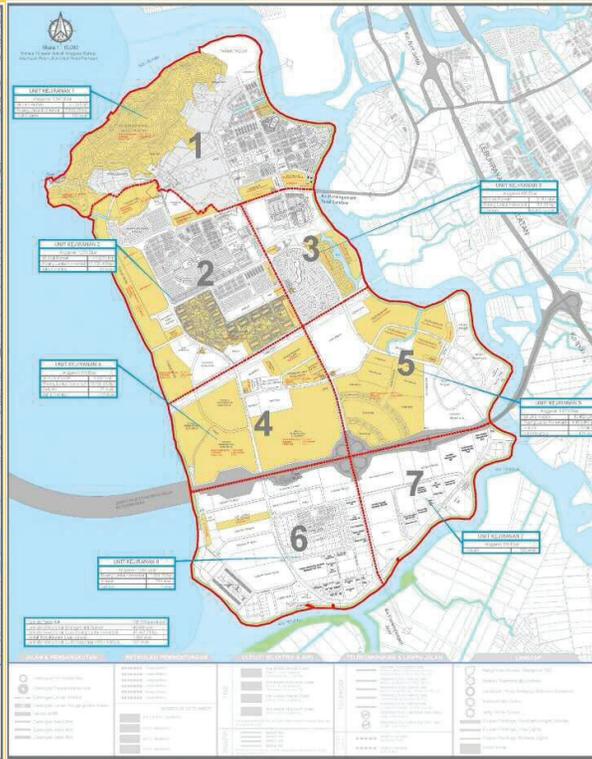
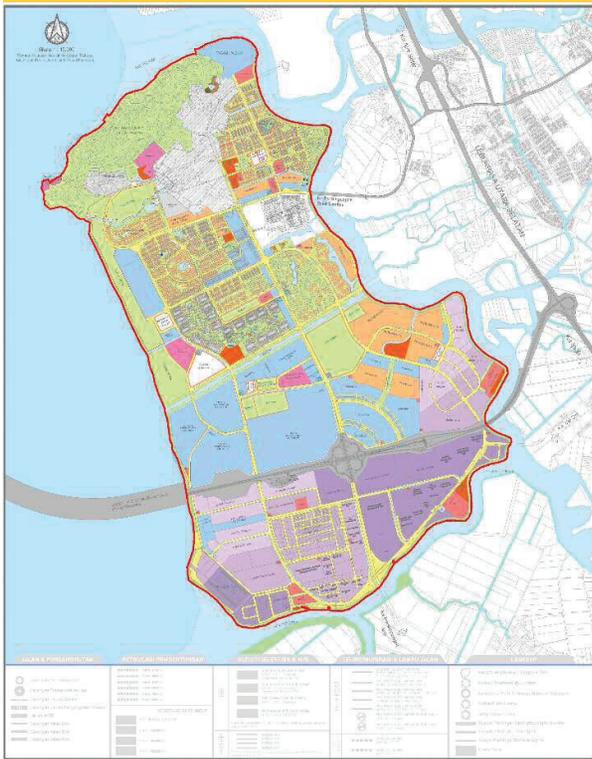


Green Neighbourhood

Neighbourhood will be integrated with eco – technology, best green practices, access to natural resources and protection, with the aim of preserving the environment, improving quality of life, safety and general welfare of city residents.



Eco-City Batu Kawan Masterplan



Landuse Master Plan

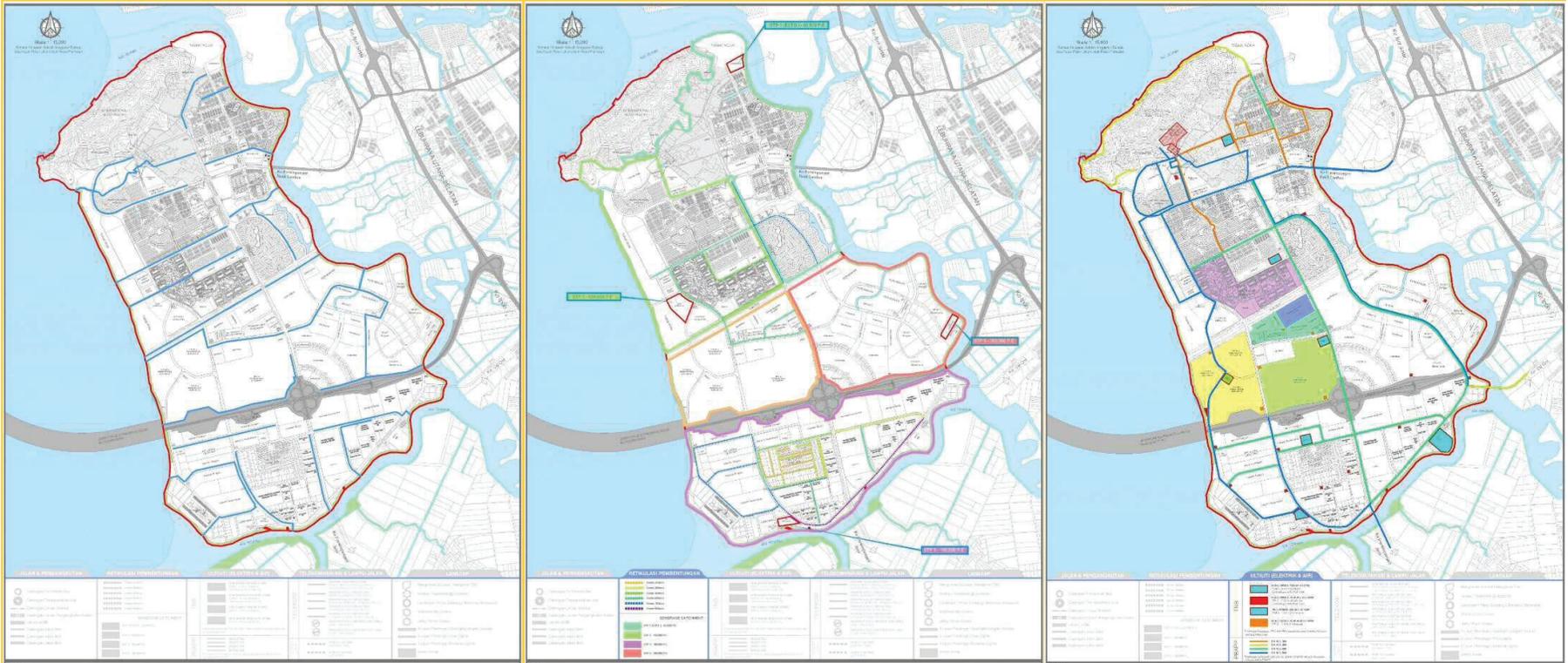


**Landuse Master Plan
(Neighbourhood Unit)**



**Accessibility And Mobility
Master Plan**

Eco-City Batu Kawan Masterplan



Drainage Master Plan

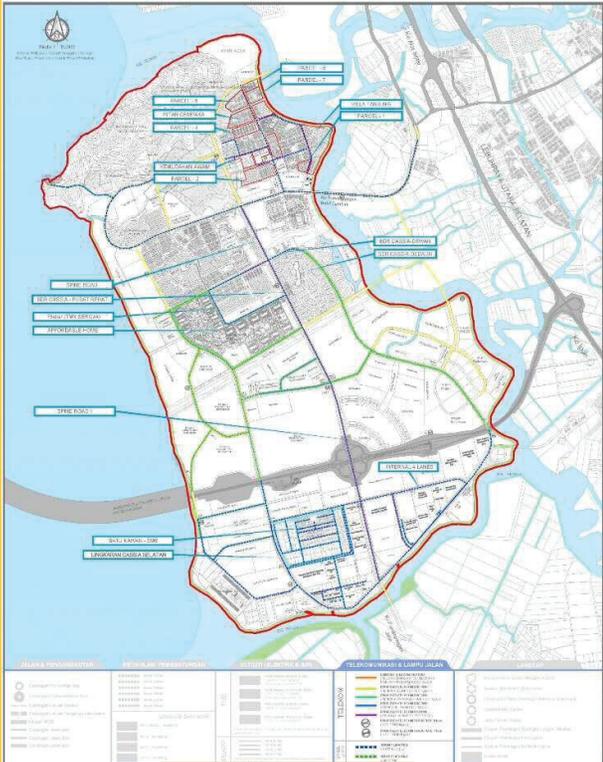


Sewerage Master Plan



**Utilities Master Plan
(Electricity & Water)**

Eco-City Batu Kawan Masterplan



Utilities Master Plan
(Telecommunication & Street Lighting)



Landscape Master Plan

Strategies towards carbon reduction

1 Green Building Index

The Council regulate that commercial and residential required to comply with at least certified rates on GBI Standard. Industrial and other type of development are encouraged to follow with the GBI Standard.

Incentive will be given as according table



GBI Rating	Incentive
Certified	Minimum Requirement
Silver	20% Increase on density / plot ratio
Gold	30% Increase on density / plot ratio
Platinum	40% Increase on density / plot ratio

2 Green Neighbourhood

The use of green technology has been developed, namely:

- LED lamps for new roads built.
- Solar-powered lighting for parks and green areas
- Solar energy power system in building are encouraged.
- Encourage sky garden and vertical landscape through development.
- Encourage usage of rain water harvesting techniques on building.
- District Cooling System for areas with a high density in a commercial area.



3 Solid Waste Management

To reduce carbon emissions from garbage truck which make waste collection from door to door, several strategies have been established :

1) Pneumatic Waste Collection System

Introducing a vacuum system in the solid waste management in urban centres and high rise development. This method will reduce the waste collection vehicle distribution in this area.



2) Garbage Collection Centre (GCC)

To Improve the conventional waste collection system and reducing leachate from compact truck, in line with Eco - City concept to reduce CO2 emissions, the Council has introduced GCC where every resident requires to dispose solid waste only in GCC. GCC designed as a drive-thru concept and the ratio required is 1 GCC for 250 premises.



4 Urban Transportation

Minimum size of road allowable in Batu Kawan is 50 feet wide, giving space for provision of pedestrian / bicycle lane and tree planting area. Public transportation masterplan has provided transportation hub, the provision of park and ride and park the truck.

5 Retaining of Existing Ecology

Eco-city concept has outlined several strategies for the retaining existing ecological namely:

- Protected areas along coastal conditions and river.
- Retention of mangroves by limiting the development of the recreation area only.
- Encourage the replacement of trees cut down at the rate of 1:3.

6 Landscape and Green Areas

This is an important element played the most important rules to reduce carbon. This is why in Eco – City Batu Kawan there have a few strategies have been created such as:

- Providing more open space different from usual requirement of 10%
- Planning a linear park along the coastal and river bank connected with urban park and neighbourhood park

7 Masterplan

Preparation of a comprehensive masterplan for ensuring Eco – City concept on Batu Kawan reached which consist of several



Land Use



Accessibility
& Mobility



Drainage



Sewerage
Reticulation



Water &
Electric



Telecommunication
& Street Light



Landscape



Solid Waste
Management



Community
Facility