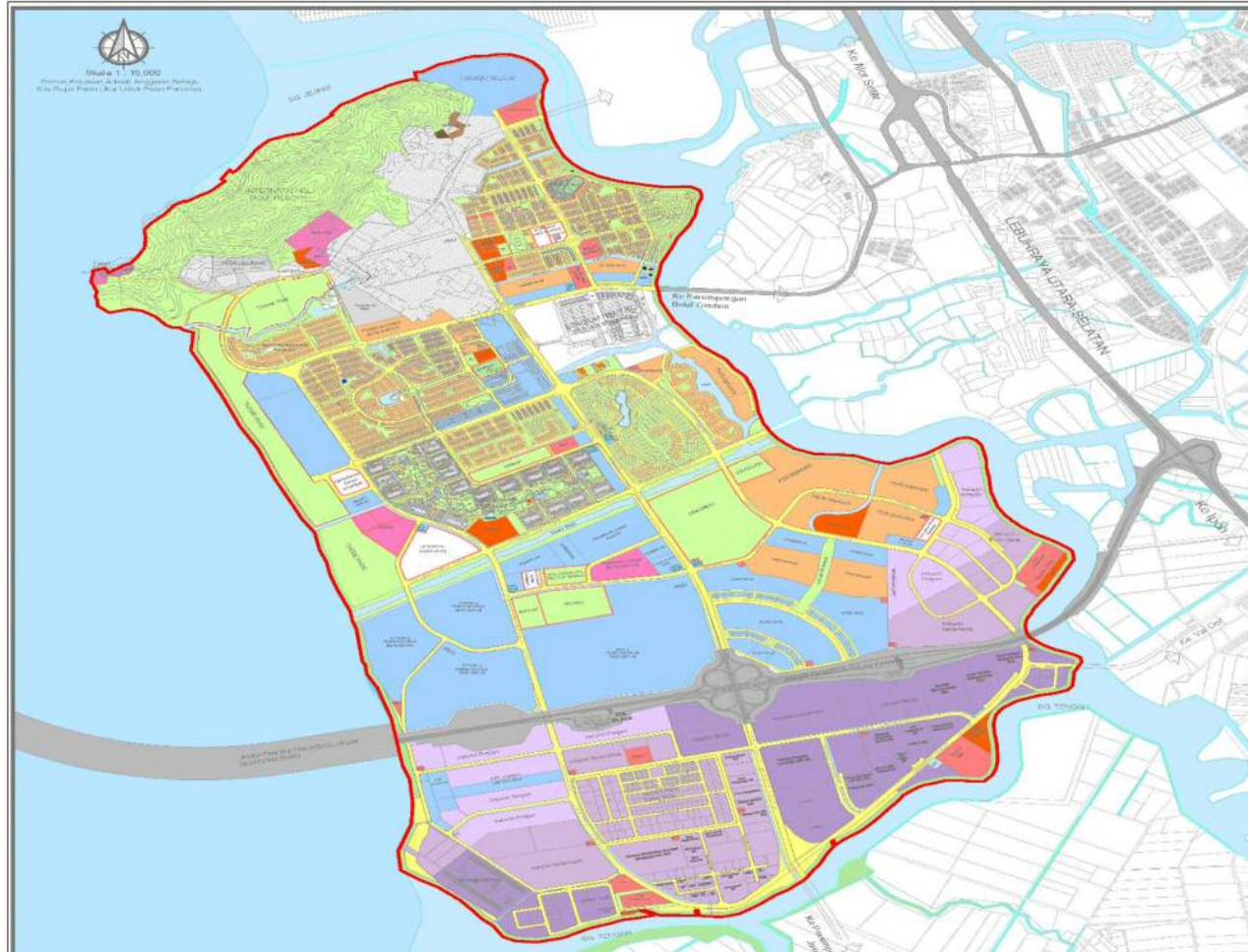


Planning of Eco-City & Green Technologies in Province Wellesley, Penang, Malaysia

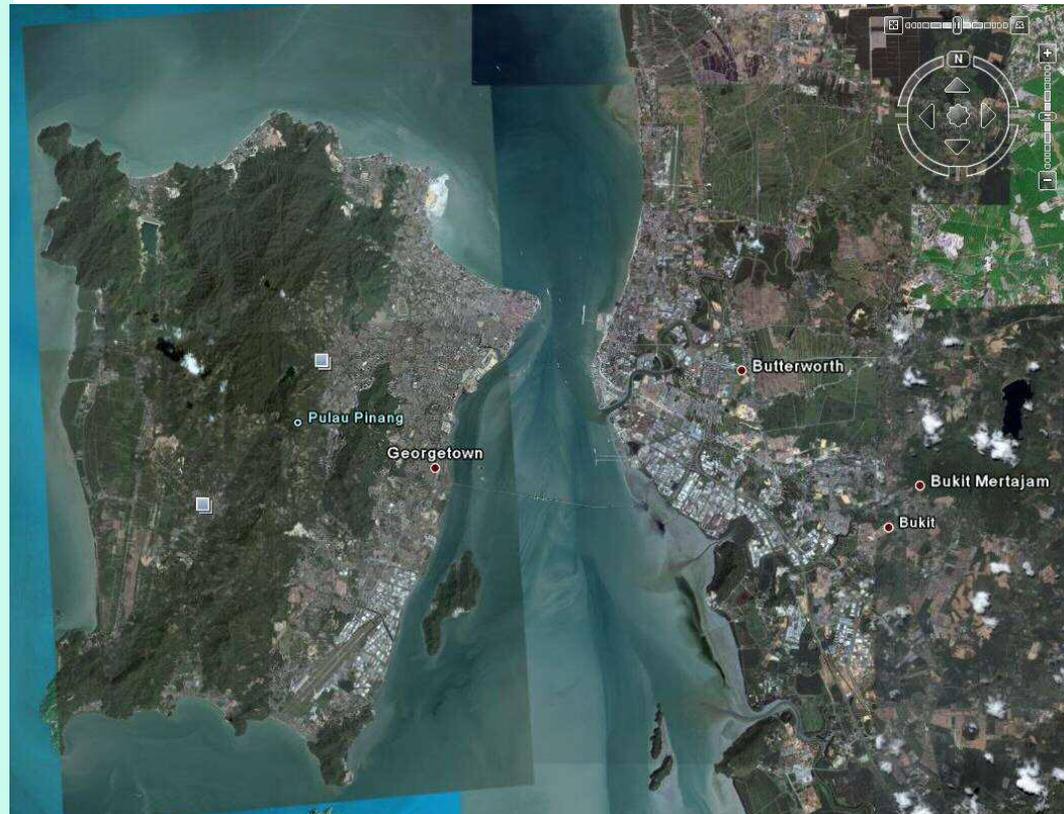


**Presented by Hon Mr Phee Boon Poh
Penang State Minister for Welfare, Caring Society &
Environment**

14th Asia Pacific Eco-Business Forum

PENANG, MALAYSIA

- Penang Island was established in 1786 by Capt. Francis Light of the British East India Company
- Mainland Penang (Province Wellesley) was occupied in 1790, and placed together under the administration of Straits Settlement.
- Independence since 31 Aug 1957
- George Town, a port town, was developed as hub for trading, commerce and culture.
- .Country : Malaysia
- Coordinates: 5o24'N 100o 14'E
- Area: 1,048 km²
- Population: 1.6 million (as of 2010)
- GDP : RM 49.5 billion (as of 2010)





Facets of Penang

UNIQUENESS OF WHS

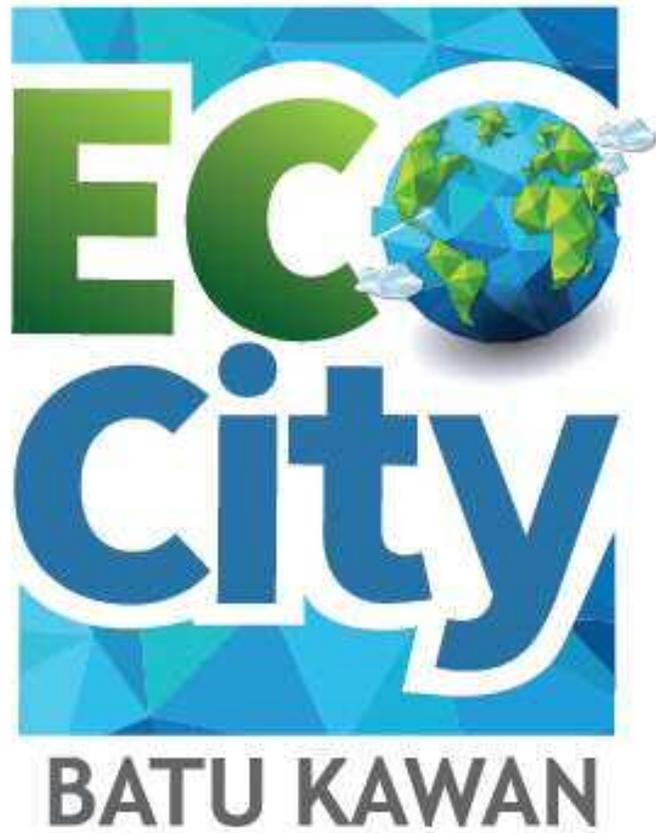
Community & Culture



Learning experiences from Kawasaki City

- Relationship and exchanges with Kawasaki City through UNEP-IETC & GEC since 2014 –visit eco-fairs & eco-Business Forums
- Learnt about Ecotown, low carbon city, 3Rs and green efforts
- Incorporated Kawasaki experiences in developmental planning
- Develop Penang's own Ecotown using concepts and principles learnt
- Identified Green field area for new industrial area and township development on mainland with the Penang Development Corporation (PDC)
- Hence the development of the Eco-city at Batu Kawan

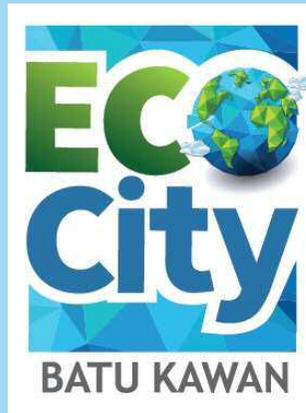




The future of seberang perai

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

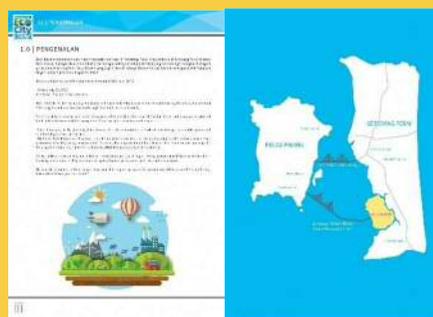
Neighbourhood Unit 5	
Approximate 1,070 Acre	
Housing Unit	10,493 Unit
Commercial Floor Space	4,450,961 foot ²
Industry	212 Acre
Infra/Institution	131 Acre

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

Guideline Preparation

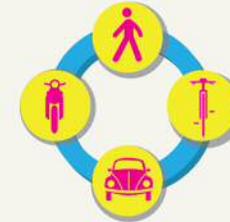
MPSP has come out a comprehensive guideline on Eco-City Batu Kawan. Various technical agencies and stakeholders were also involved in preparing this guideline even though limited knowledge and experience in eco-city framework, endure hope creating better future for Batu Kawan.



Fundamental Concept



Ecology Preservation



Accessibility



Safe City



Zero Renovation



Neighbourhood Unit



Affordable Housing



Solid Waste Management



Green Building



Green Neighbourhood

SUSTAINABLE DEVELOPMENT GOALS



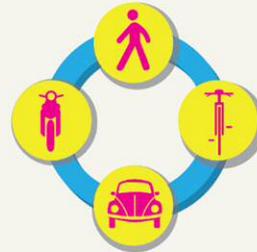
Meeting SDGs

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



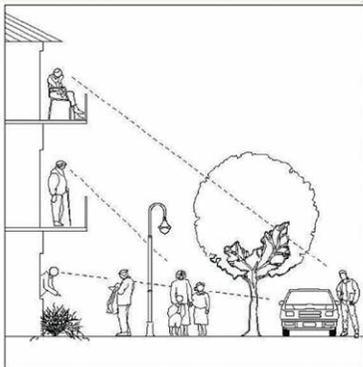
Accessibility

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)

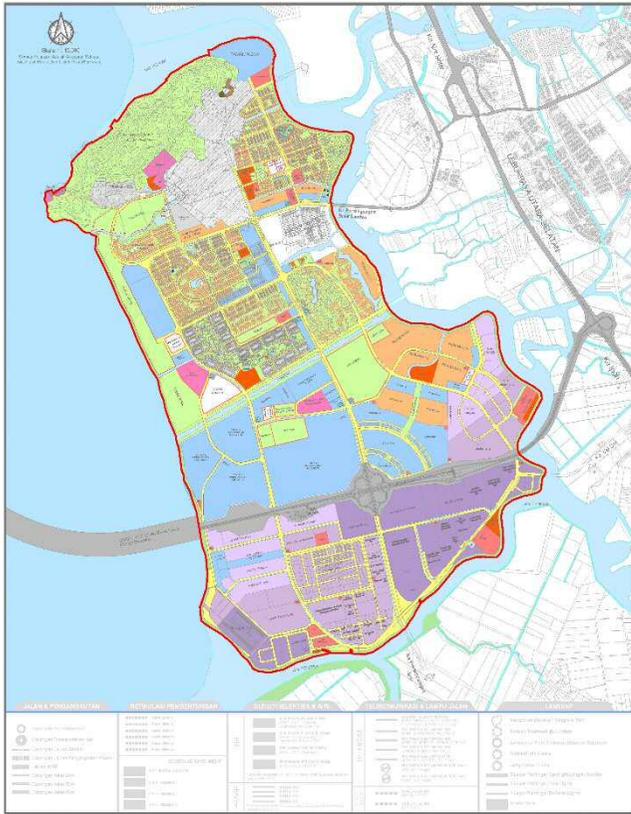


Green Neighbourhood

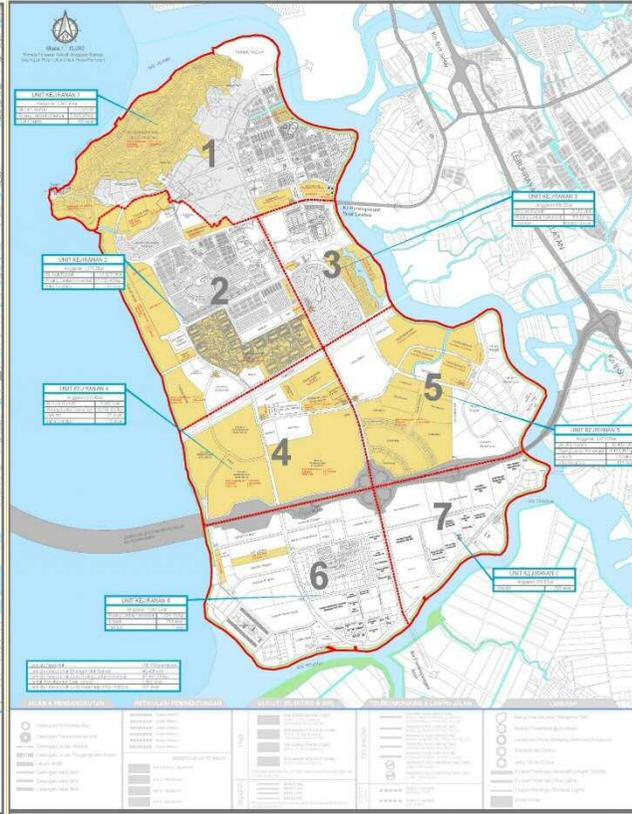
Neighbourhood will be integrated with eco – technology, best green practices, access to natural resources and protection, with the aim of preserving the environment, improving quality of life, safety and general welfare of city residents.



Eco-City Batu Kawan Masterplan



Landuse Master Plan



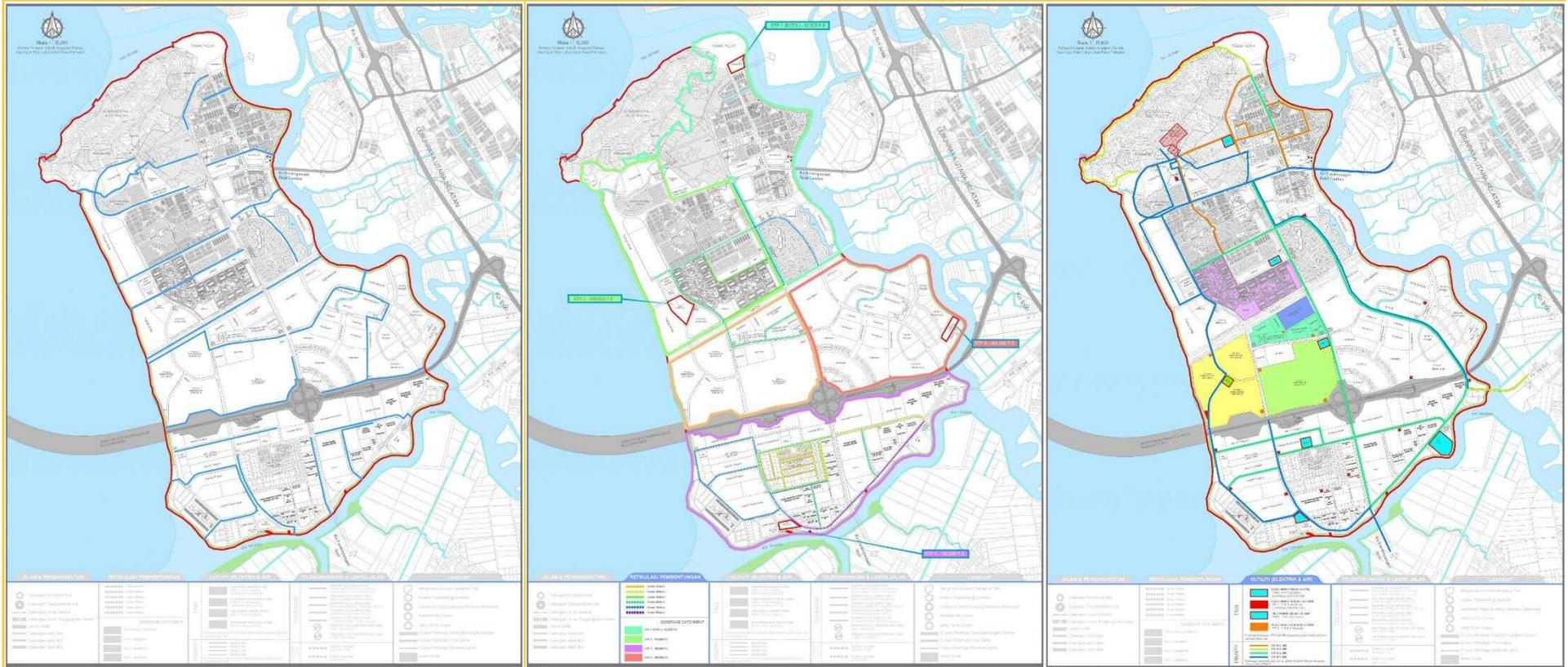
**Landuse Master Plan
(Neighbourhood Unit)**



**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

A retail paradise in the making

With more malls in the pipeline for Seberang Perai, the competition with Penang island is bound to tighten

By David Tan
davidtan@berita.com.my

THE FIRST major shopping mall to be opened in Seberang Perai is the 1.2-million-sq-ft Ikea outlet, which is set to open in the third quarter of 2018. The outlet is located in the 24-acre Batu Kawan site, which is being developed by the Aspen Group.



The proposed site of the Ikea outlet in Batu Kawan, which is set to open in the third quarter of 2018.

The outlet is set to be the first of several major retail developments in the area. The Aspen Group is also planning to build a 1.5-million-sq-ft Ikea outlet in the same area, which is set to open in the first quarter of 2019. The outlet is also set to be the first of several major retail developments in the area.



The proposed site of the Ikea outlet in Batu Kawan, which is set to open in the third quarter of 2018.

Ikea confirms Penang outlet will open in 2018

Work at its 24-acre Batu Kawan site has started

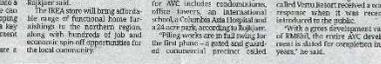
By David Tan
davidtan@berita.com.my

GEORGE TOWN: The Ikea store in the northern region will open in the third quarter of 2018. The outlet is located in the 24-acre Batu Kawan site, which is being developed by the Aspen Group.



The proposed site of the Ikea outlet in Batu Kawan, which is set to open in the third quarter of 2018.

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The proposed site of the Ikea outlet in Batu Kawan, which is set to open in the third quarter of 2018.

Design Village set to open in Nov

AHEAD OF SCHEDULE: PE Land will be first investor at Batu Kawan to open shop at premium outlet mall

MARINA EMMANUEL

THE DESIGN Village outlet is set to open in November 2018. The outlet is located in the 24-acre Batu Kawan site, which is being developed by the Aspen Group.



The proposed site of the Design Village outlet in Batu Kawan, which is set to open in November 2018.

RM40b foreign investment target for manufacturing

GEORGE TOWN: The state government is targeting RM40 billion in foreign investment for manufacturing in the next five years.

MARINA EMMANUEL

The state government is targeting RM40 billion in foreign investment for manufacturing in the next five years. The target is set to be achieved through a combination of incentives and infrastructure development.



The state government is targeting RM40 billion in foreign investment for manufacturing in the next five years.

Benefits of Eco City guideline and masterplan

Economy

- Attract more developers from incentive given thru complying Green Building Index
- Guideline impose causing an extra green area, more green environment and eco - friendly facilities
- Growth in green product and services in accomplishing Eco-City standards

Social

- Restrain carbon consumption by introducing eco - friendly way of living such as recycling and encouraging provide more green areas.

Environment

- Enhance environmental quality by retaining and make use existing ecology

- Reduce CO2 emission by centralize facilities, lowering spaces needed for facilities thus maximise efficiency

EPF keen to partner Eco World to develop Penang townships

By Marina Nizam



Eco World Development Group and chairman Tan Sri Lee Kim Seng (left) and EPF chief executive officer Datuk Chang Khim Wah (right) at a press conference in Kuala Lumpur yesterday.

KUALA LUMPUR: The Employees Provident Fund (EPF) is keen to participate in the development of the land in Batu Kawan, among others, by assisting Eco World Development Group Bhd.

The group's plans to raise equity at the project level via its partnership for growth investment model have borne fruit. We look forward to welcoming EPF as our development partner and are confident that with its support, the group will continue to grow from strength to strength."

Details of the joint development would be decided upon expiry of the relevant agreements with the state government. EPF could also be the development partner for Eco World's other projects, such as Eco Gardens and Eco Harbour 2 in the Batu Kawan area, as well as Eco Alliance near Setia Alam in Bukit Jalil, Shah Alam.

Lee said the proposed acquisition of two pieces of land in Batu Kawan were in line with his strategy to focus on the country's three main economic corridors, namely the Klang Valley, Penang and Iskandar Malaysia.

The blocks are close to the Sultan Abdul Halim Stadium, Shell Bridge and the new Kuala Lumpur International Airport 2.

Rise of a thrilling metropolis

By Marina Nizam



The proposed site of the development in Batu Kawan, which is set to be completed by 2025.

THE RISE of a thrilling metropolis is under way in the northern region. The development of the land in Batu Kawan is set to be completed by 2025. The development is set to be a mix of residential, commercial, and recreational facilities.

Ikano to open Penang's first Ikea outlet in 2018

By Marina Nizam

GEORGE TOWN: Ikano Private Limited, the owner of the Ikea franchise in Malaysia, confirmed its plan to open a store at Batu Kawan on mainland Penang by the third quarter of 2018.

Reno and the Aspen Group teamed up in September 2016 to purchase 95thA from the Penang Development Corporation.

The joint venture company Aspen Vision City Sdn Bhd is working to transform the vast swaths of land in Batu Kawan into a new metropolis where people can live, work and play," the company said in a statement.

12 September 2016

The Secretariat (Planning Excellence Awards),
Malaysian Institute of Planners,
B-1-02, Jalan SS7/13B,
Plaza Kelana Jaya,
47301, Petaling Jaya.



PE LAND

PE Land (Penang) Sdn Bhd (047556-H)
The Spring Centre Management Office
Lot 304, 3rd Floor, The Spring Shopping Mall
Persiaran Spring, 93300 Kuching
Sarawak, Malaysia
T +6082 238 111
F +6082 233 519

Dear Sirs,

Cadangan Skim Perniagaan (Fasa 1) Di Atas Sebahagian Lot 282, Lebuhraya Bandar Cassia, Batu Kawan, Mukim 13, Seberang Perai Selatan, Pulau Pinang

- A) 147 Unit Kedai 1 Tingkat
- B) 1 Blok (17 Unit) Kedai 2 Tingkat
- C) 1 Blok Tempat Letak Kenderaan 7 Tingkat

Untuk Tetuan PE Land (Penang) Sdn Bhd

Penghargaan kepada MPSP kerana Berjaya Menghasilkan Satu Garis Panduan dan Pelan Induk Di Bandar Cassia, Batu Kawan, Sebagai Bandar 'Eco-City' yang Serba Moden, Canggih dan Selesa untuk Di Diami

The northern region's first premier outlet mall 'Design Village' at Bandar Cassia new township, Batu Kawan on mainland Penang, under Majlis Perbandaran Seberang Perai (MPSP), is set to open its doors in November 2016, that cater to a domestic catchment of 5.5 million and an international catchment of 4.7 million.

The Developer, PE Land (Penang) Sdn Bhd, will emerge as the first investor at Bandar Cassia to open for business, since the Penang State Government, Penang Development Corporation (PDC), and MPSP announced its plans to transform the area into a new thriving 'Eco-City' township.

Unlike other outlet malls, 'Design Village' features shady landscaping, thoughtful water features, covered air-cooled walkways, considerate rest areas, and the best of Penang's hawker cuisine, making it a destination that promises a comfortable, enjoyable experience in Malaysia's hot and inclement weather, in line with Eco-City guidelines, which was briefed in details to all Bandar Cassia developers on 3 July 2014, by MPSP.

These are a couple of measures already executed by PE Land (Penang) Sdn Bhd, within 'Design Village' outlet mall development to conform with Eco-City guidelines set by MPSP:-

- 1) We merely developed approximately 400,000 sq. ft. at low plot ratio of 1:0.23 with majority single storey shops on 25 acres of development land, even though we are permitted to build on a maximum plot ratio of 1:5.
- 2) We purchase and install at about RM2 millions on locally manufactured Light-Emitting Diodes (LED) and Solid State Lighting (SSL) systems in all these public premises, as a showcase for the LED and SSL industry as well as to tremendously reduce the electricity consumption:
 - a) Multi-storey carpark building
 - b) Shop front and back corridor
 - c) Hard and soft landscape
 - d) Driveway and open carpark
 - e) Jewel box building façade
 - f) Mall management offices
- 3) We designed hard and soft landscape works, at about RM9 millions, based on a ratio of 50% : 50% with all mature trees being brought in to a nursery at construction site for acclimatization process in ensuring their survival before they were planted.

- 4) We provided a total of 12 disabled carpark bays (5 nos. on open carpark & 7 on multi-storey carpark building), even though MPSP only required 5 disabled carpark bays.
- 5) We designed two (2) smoking rooms solely for smokers, as 'Design Village' is designated as non-smoking zone outlet mall.
- 6) We installed two (2) Electronic Vehicle Charging Stations (chargEV stations), as vehicle charging zone, within multi-storey carpark building by GreenTech Malaysia, a government agency that promotes Green Energy for public usages.
- 7) A retail unit with full facilities being assigned, as Police Beat Base, based on the cooperation rendered by the Chief Police of Penang, since the nearby police station is situated far way.
- 8) We provided three (3) large refuse collection bins and a storage room for segregation of recycling, construction, and wet materials.
- 9) We install a centralized grease trap under the maintenance team of the Developer to 2 Storey F&B building that housed a foodcourt and many F&B shops. Each foodcourt stall and F&B shop are also compulsory to install their own grease traps.
- 10) We designated 'Ladies' Carparking Zone' on Level 1 of multi-storey carpark building.
- 11) We adopted the reserved land for LRT/MRT from PDC for hard and soft landscape works for the benefits of the surrounding community.
- 12) We created a central spine with hard and soft landscape works to bring the guests from the retail units to F&B building and leading them directly into the proposed Linear Park.
- 13) We provided bicycle zone (alongside motorcycle parking zone) to encourage public cycling since we already designed cycling pathway beside pedestrian pathway.
- 14) We designed and installed CCTV, security tour guard, panic buttons, guard posts for surrounding security purposes.
- 15) Two LED search lights are installed on top of the roof of lift motor room, as part of the new outlet mall attraction and for security purposes.

With a joint-partnership together with MPSP, under their new Eco-City guidelines set and implemented, we strongly believe and trust that Bandar Cassia will eventually become a Eco-City New Township in a couple of years, compare to other township in Malaysia.

The top management of PE Land (Penang) Sdn Bhd clearly support MPSP under the leadership of Yang Berhormat Dato' Maimunah Mohd Sharif and her team to win this upcoming Planning Excellence Award.

Should you require any further clarification/information on the above, please do not hesitate to directly contact the undersigned.

Thank you.

Yours gratefully,
PE Land (Penang) Sdn Bhd


Ernest Chuah
Director of Operations



PE Land Design Village

Approved for Planning Permission: 18th November '15
Expected complete : End of November '16

Phase 1 Development :
147 Commercial Unit 1 Floor
1 Commercial Block 2 Floor (17 Unit)
1 Unit 7 Floors Parking



DESIGNER VILLAGE PENANG
The Retail Experience in Penang



PE Land Design Village



Glass Top Roof with Heat Insulation



Light Emitting Diodes (LED) and Solid State Lighting (SSL) system



Hard and soft Landscape Ratio of 50% : 50%



12 Disable Carpark Bays provided (Required 5 Disable Carpark Bays)



Smoking Rooms solely for smokers



2 Electronic Vehicle Charging Station (charge Station) bays



PE Land Design Village



Ladies "Carparking Zone" on Level 1 of Multi-storey carpark building



Soft & Hard Landscape construct on LRT/MRT reserved land



Access with Soft & Hard Landscape to B.Kawan Linear Park



Control Room for Security purpose



Plastic rooftop designed to trap heat inside from sunlight

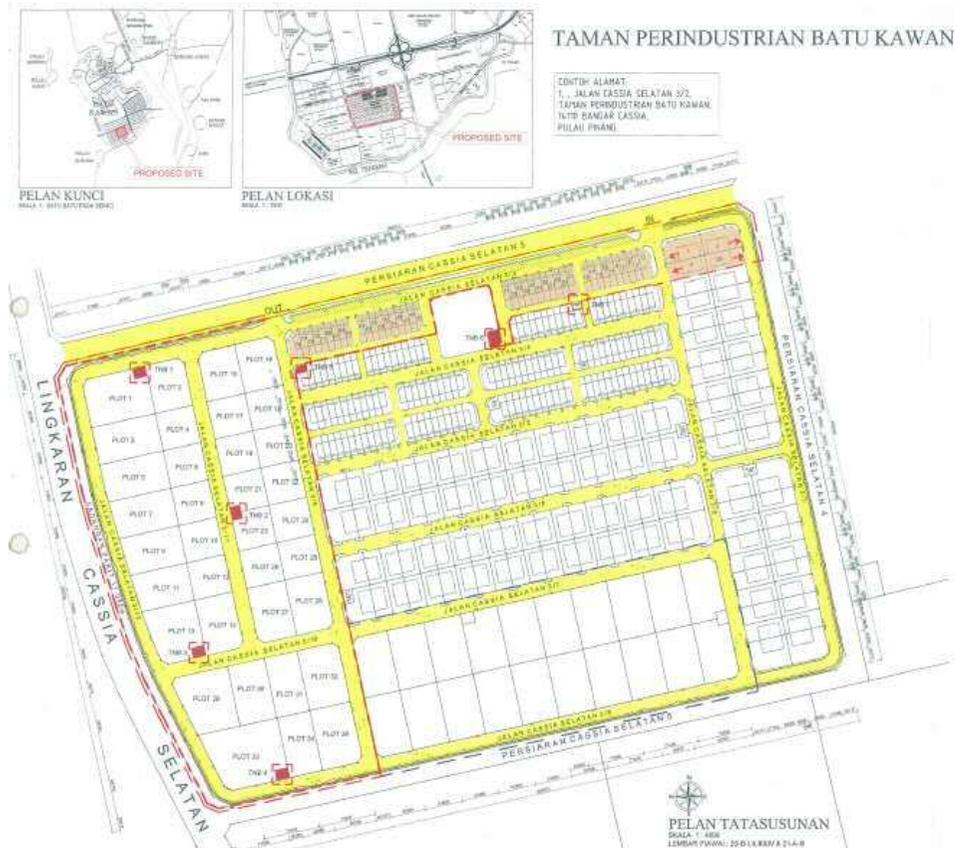


MSMA Drainage system

IKEA BATU KAWAN, PENANG



SME VILLAGE BATU KAWAN



AFFORDABLE HOUSING





THANK YOU