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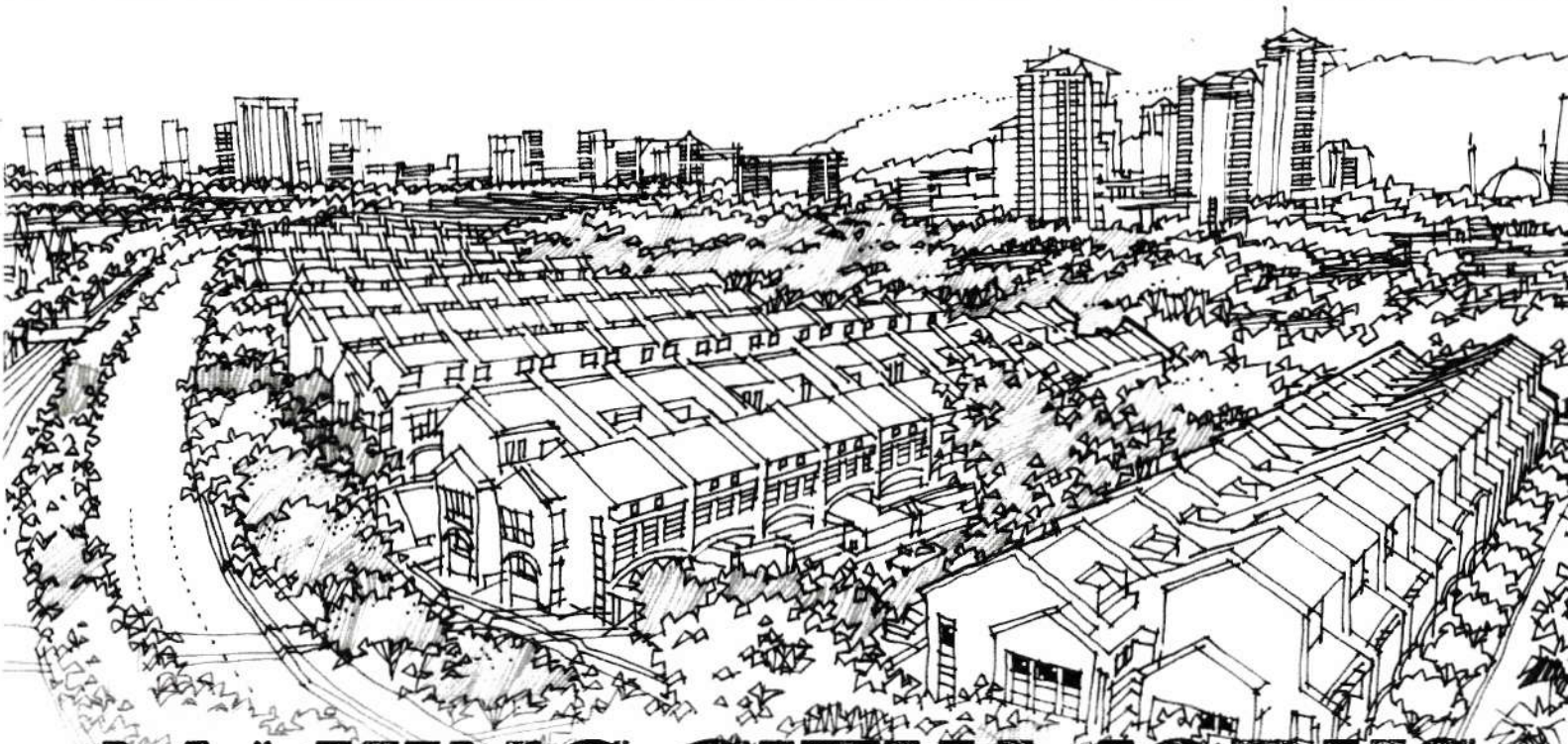

MAKING CITY WORKS FOR THE COMMUNITY

IN THIS ISSUE

EDITORIAL BOARD

EDITORIAL

Writer: Assoc. Prof. Ar. Meor Mohammad Fared

"Not only is the city an object which is perceived (and perhaps enjoyed) by millions of people of widely diverse class and character, but it is the product of many builders who are constantly modifying the structure for reasons of their own. While it may be stable in general outlines for some time, it is ever changing in detail. Only partial control can be exercised over its growth and form. There is no final result, only a continuous succession of phases."– Kevin Lynch

With the theme **Making City Works For The Community**, this issue explores various efforts to create a more sustainable and liveable city for the community and its people.

River of Life For Greater KL : Restoring The Sense Of Belonging dwells into river revitalisation project by the Government of Malaysia in the heart of Kuala Lumpur.The River of Life (ROL) project is an ambitious project to revitalise the Klang and Gombak River that flow through the heart of Kuala Lumpur and Selangor.

Revisiting Putrajaya critically looks into the development of Putrajaya after its inception as a Garden City in 1999. The article opined that to be a more sustainable and liveable city, Putrajaya should address the provision of mixed use precincts, transformation of the waterfront and creating a networks of transit oriented communities (TOCs).

An Overview of GBI Assessment Tool for Township provides a general outlook on a framework which serves as a guide for Local Authorities, developers, builders and professionals to deliver sustainable townships and communities.

Beddington Zero Energy Development (BedZED) offers a glimpse what have been done in the United Kingdom where a mixed used development conceived in the year 2002 has blossomed into a matured neighbourhood full of innovative and creative solutions to achieve sustainable development.

Translocating A Traditional Timber House is a two part article that looks into an effort by Universiti Putra Malaysia (UPM) to preserve a traditional Malay timber house through translocation process of an existing timber house from Terengganu to UPM. While *IRDA : Actions for a Low Carbon Future* looks into Iskandar Regional Development Authority efforts in promoting holistic sustainable developments.

Wishing readers a blessed Ramadhan and a joyous Aidil Fitri celebrations.

UPCOMING EVENTS

Workshop on Seismic Design of Buildings

Date : 18 & 19 August 2014
Venue : Putrajaya Marriott Hotel
Organisers : MySET, HRC & Civil Engineering Department, UPM

Seminar on Designing for Aging Community

Date : September 2014
Venue : UPM
Organiser : HRC and Faculty of Design & Architecture, UPM

A Half-Day Seminar on Buying A House

Date : 16 October 2014
Venue : UPM
Organiser : HRC

Research Priority Areas of Urban Greenery Workshop

Date : October 2014
Venue : UPM
Organiser : Faculty of Design & Architecture, UPM

International Conference on Settlements and Traditional Environment (IASTE) 2014

Date : 14-17 December 2014
Venue : Kuala Lumpur
Organiser : IASTE and Faculty of Design & Architecture, UPM

Housing News Editorial wishing all the readers...

Salam Aidil-Fitri

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RIVER OF LIFE FOR GREATER KL

RESTORING THE SENSE OF BELONGING

RIVER AND CITY

Many rivers in the world were known as cradle of greatest cities and civilisations. Among the most prominent ancient civilisations are Nile River in Egypt, Indus River in India, and Yellow River in China. Besides playing role as main water resources, the river also functions as mode of transportation, genesis for food supply, plants fertilizer, and significantly as cultural, and social symbolism and activities.

River is a distinctive feature in the cities and it functions as the main artery in the heart of cities and restoring various historic and establishing morphology of the urban form. In town planning, river can be defined as a nature edges that separates the cities into two zones. As stated by Kevin Lynch;

> "Edges are the linear elements not used or considered as paths by the observer, they are the boundaries between 2 phases, linear breaks in continuity: shores, railroad cuts edges of developments, walls"
> (Lynch, 1960:47)

HISTORY OF KLANG AND GOMBAK RIVER

By the same token to Kuala Lumpur, the city was formed on the confluence of two rivers namely Klang River and Gombak River. According to JM Gullick, Kuala Lumpur was established by the Chinese miners' activities and Klang River was an ideal route to carry men and goods.

Apart of the distinctive history of Klang and Gombak River as a hub of economic and mining industries, the confluence of both rivers also contributes towards the changes of Kuala Lumpur Urban Morphology. On the side of Klang River that comprises of Kampong Rawa, Garden, Malay Burial Ground and Old Market in the late 1870's changed to a collection of Government Buildings in 1880's which some of them still remaining on the site until today (Figure 1 and 2).

A History of Kuala Lumpur 1856-1939, JM Gullick, MBRAS

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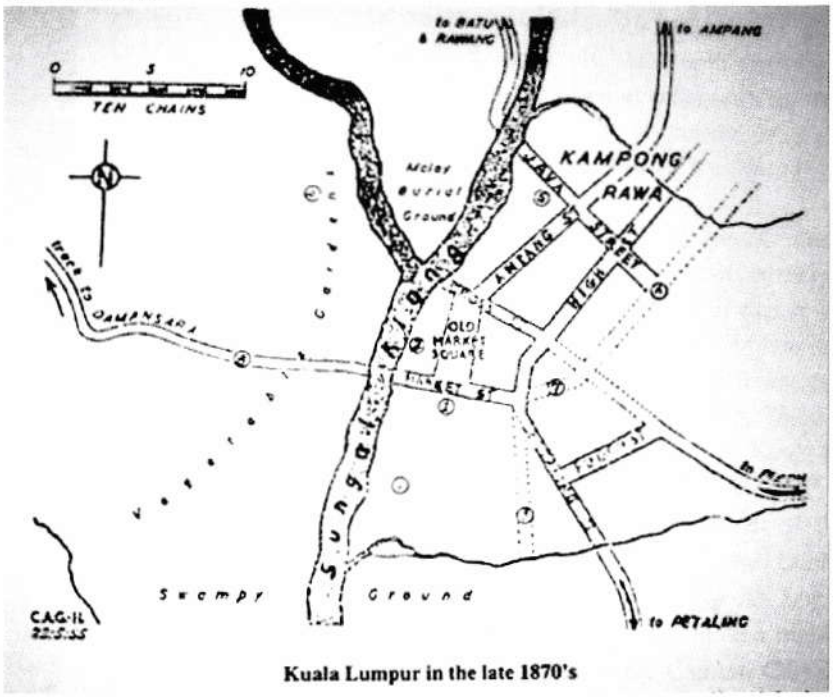
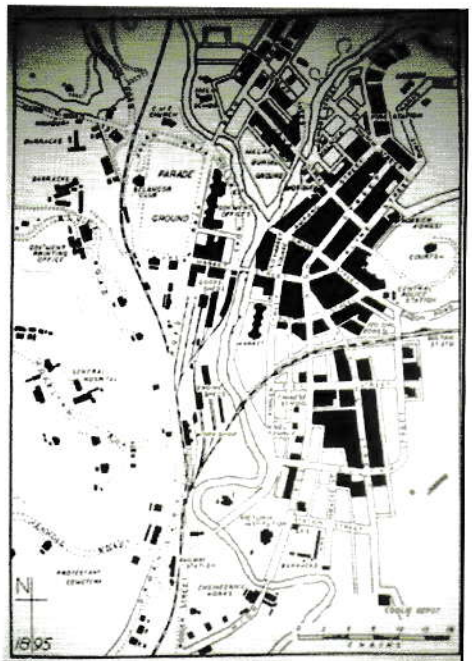


Kuala Lumpur in the late 1870's



The 1895 Map

The Sanitary Board, established in 1890, promoted or regulated rapid development of streets and buildings, land reclamation etc. This map, based on the 1889 map (Figure 4) and other data, was drawn up by the Town Planning Dept in 1950 as an historical record.

For centuries, Klang and Gombak River has contributed towards the community and urban growth for Kuala Lumpur. After 1890, both river also constituted a new backdrop of architectural characters along the stretch including, Bangunan Sultan Abdul Samad, Central Market, Supreme Court, and Old Municipal City Hall. Nonetheless, the most remarkable building that remains sited on the confluence of both rivers until today is Jamek Mosque. Perhaps, the strategic location of Jamek Mosque was intentionally to denote Islam as the official religion of Malaysia in the heart of Kuala Lumpur City Center.

"The mosque on Java Street, completed in 1881, was probably a simple wooden building. The triangle of land between junction of the Gombak and Klang Rivers was the original muslim burial ground, but in 1891 it had cleared and fenced. Seventeen years later, it provided a site for a larger and more impressive mosque, for which the Malay and other Muslim residents were able to subscribe $12,000." (164, JM Gullick, 1955)

THE IDEA OF RIVER REVITALISATION

Taking cue from the accomplishment of several River Revitalization projects in Asia, which include the Hai River in Tianjin-China, and Cheong Gye Cheon River in Seoul, Korea, Kuala Lumpur City Hall (DBKL) embarked on the River of Life project. Apparently, the similarities between both rivers with Klang and Gombak River are the prominent location at the heart of a city center, unique public spaces and the emblematic historical and heritage surrounding them.

"In crafting an embankment, the designers looked to culture – not just vernacular colors and symbolism, but to habits, which is why today on the Hai river Embankment, at the very heart of a city of ten million people, people are dancing, practicing tai chi, fishing, picnicking, bicycling, diving into the water." (230, Thames & Hudson, Asia Beyond Growth.)

"The restoration of Cheong Gye Cheong brings it back to life and restores a part of the 600-year history and culture of Seoul. It will help Seoul be reborn as an environment-friendly city centering around nature and people." (Tourist Map of Cheong Gye Cheon)

INITIATIVE OF RIVER OF LIFE PROJECT IN KUALA LUMPUR

"One pressing issue that greatly affects the region is the water quality of Sungai Klang. This river flows through Kuala Lumpur and Selangor before it eventually flows into the Straits of Malacca. The river is 120 km in length and drains a basin of 1288 sq. km. Cleaning the river will enhance the most populated area in the country. However, such effort is only possible through integrated river management procedures and practices that are adopted by Kuala Lumpur City Hall and all the municipalities. This also calls for controls in planning and development for various land uses and activities within the river catchment area as well as management of stormwater/runoff to prevent and manage pollutants from entering the river system." (2.8, 226, Kuala Lumpur City Plan 2020)

River of Life (ROL) Committee has carried out an international competition in order to attain the best master plan and design idea for an unprecedented project in Kuala Lumpur and Greater KL.

As far as the river quality issues are concerned in KLCP 2020, government has initiated idea of River of Live Project (so called Entry Point Project) under Economic Transformation Programme (ETP) for Greater Kuala Lumpur. The project is divided into 3 phases consisting, River Cleaning, River Master Planning and Beautification, and River Development.

For Klang Valley basin, the 120 km stretch river cleaning project involves territory under DBKL followed by Majlis Perbandaran Selayang (MPS), and Majlis Perbandaran Ampang Jaya (MPAJ). Nonetheless, the River Beautification phase will only involves 10.7 km stretch of Klang and Gombak River and the project implementation phase will be led by DBKL.

"The centre stage of development in Malaysia has always been Kuala Lumpur, where development and concomitant urbanization emanated to the surrounding areas." (148, Hamirdin, Jamalia, Nik Nasriah) Thus, the River of Life project should be initiated by KLCH from Precinct 1 to Precint 11, stretching from Puah Pond to Mid Valley Area.

River of Life (ROL) Committee has carried out an international competition in order to attain the best masterplan and design ideas for an unprecedented project in Kuala Lumpur and Greater KL. Among participants were Korean Engineering Consultants Corporation and AECOM Design and Planning Practice that were shortlisted in the River of Life Project (ROL) were involved in the restoration project for Hai Jin River, Tianjin and Cheong Gye Cheon River, Seoul.

As result of their pertinent experiences, their proposed schemes have fulfilled most of the judging criteria. Eventually, AECOM won the competition by enhancing the idea of reconnecting the people to the river, open spaces, plazas, and bringing back the river cruise as a mode of public transportation system along the river. By crafting promenade along the river embankment, the existing eyesore and the local cosmopolitan life quality can be improved. The previous gaping hole between the river, community, and the city can be bridged if the river revitalization succeeds.

Apart of enhancing the public realm through river and promenade, the beautification of river will involve the restoration works of the contiguous heritage buildings that was drab and neglected. The tangible heritage around the river constitutes a priceless value to the urban and historical narration to Kuala Lumpur. By actively engage the river, heritage, and community, Kuala Lumpur will unify and crafting into the livable city in the future. ■

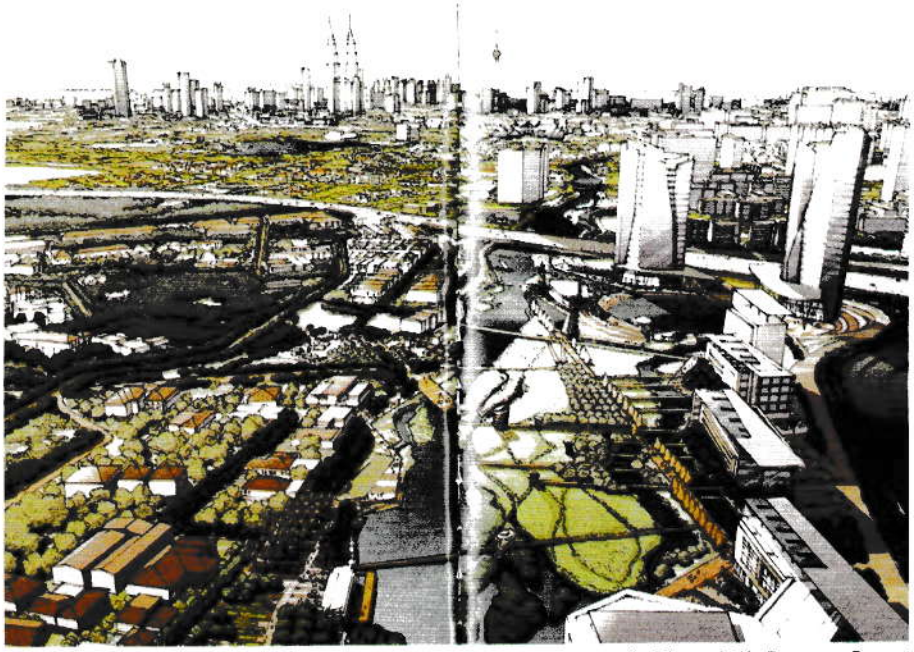
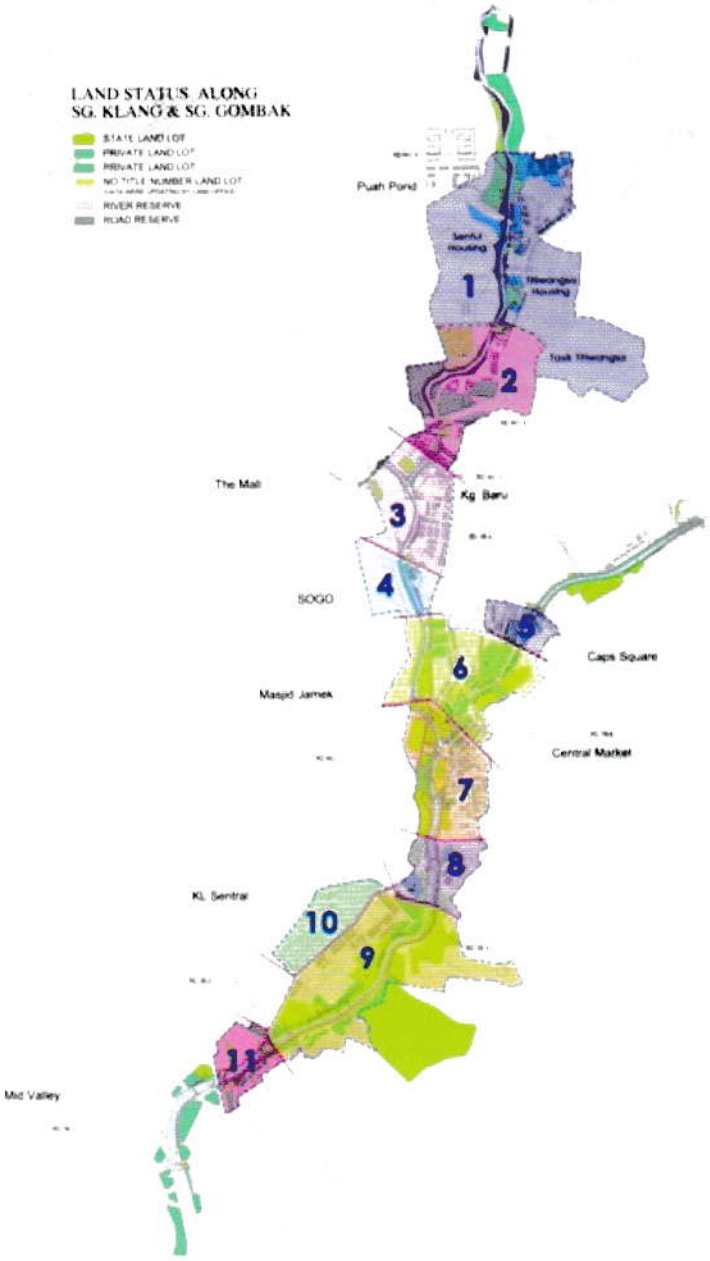


Photo credit: River of Life Progress Report



REVISITING *Putrajaya*

In Putrajaya physical access has been provided to Lake but the visual connectivity is limited.

Dr. Marek Kozlowski
Fac. of Design & Architecture, UPM

The major challenges facing contemporary Putrajaya are related to its performance as a sustainable and liveable city. Being part of Multi-Media Super Corridor, Putrajaya has been developed as an intelligent city with a common utility tunnel containing basic urban services, fibre optic and multi-media cables. Nevertheless Putrajaya needs to improve its position in the field of sustainable urban planning and design. Although Putrajaya resembles a Garden City it is very much a car dominated environment, lacking active and vibrant mixed use precincts, without properly functioning and efficient public transport and until recently turning its back to its major asset Lake Putrajaya. In order to become a more sustainable and liveable city Putrajaya should address the following issues that have been universally recognised as the basic precepts of a sustainable urban environment:

1. Provision of mixed use precincts
2. Transformation of the waterfront
3. Creating a network of transit oriented communities

PROVISION OF MIXED USES

As part of an on-going discourse, the traditional planning approach of separating land uses has been challenged in the last decade and the provision of mixed use areas became one of the basic principles of a sustainable city. Developing more compact mixed use communities significantly reduces car dependency, encourages walkability and contributes in creating street activities and vibrant urban enclaves. In order to achieve increased usage of existing streets and public spaces it is essential to promote more residential development in the existing government and administrative precincts. Accommodating mixed use development and encouraging residential enclaves within existing government and administrative areas is critical in transforming Putrajaya into a more sustainable and liveable city.

It is also imperative to encourage active building/ street interface along major streets including the main boulevard Persiaran Perdana. Active frontages for commercial and mixed use buildings can be characterised by lively internal uses spilling out onto the street, exposed shop front windows, façade rhythm and building articulation, numerous access points and building entrances (refer Figure 1).

Figure 1 Active street frontages on ground floor of new residential developments. Sentul, Kuala Lumpur (left) and Kelvin Grove Urban Village, Brisbane, Queensland, Australia (right).
Source M.Kozlowski

TRANSFORMATION OF THE WATERFRONT

In order to ensure the utilisation of any public recreational space it is essential to investigate the physical, visual and physiological access to that particular space. Physical links can be established by the choice of routes while visual connectivity can

be achieved through opening vistas and creating visible landmarks and other elements that can be used for reference. Psychological access refers to how the place is welcoming to all the members of the society. In Putrajaya physical access has been provided to Lake but the visual connectivity is limited. The major government and administrative precincts are located on the Core Island surrounded by water but there are not too many view corridors and vistas opening to the Lake. However, the biggest problem is the issue of psychological access. Large sections of Lake Putrajaya foreshore are perceived as barren and empty and located at a significant distance from nearest residential areas. As a result the area translates as a place not safe and welcoming to a majority of end-users.

One of the major tests facing Putrajaya is to visually connect to the lake, and make the area more welcoming and user friendly by encouraging numerous enclaves of daytime and evening activities, events and festivities along its foreshore. Promoting mixed use and residential development along and within walking distance of the Lake will significantly contribute in creating a lively and vibrant environment. Water festivities such as the Liu Sanjie show on River Li in Yangshuo County, City of Guillin, China and the 'Opera on the Lake' festival on Lake Constance in Bregenz Austria could be benchmark examples and inspiration for similar events on Lake Putrajaya (refer Figure 2).

Although Putrajaya has a major transport hub linked to other prominent centres in the KL-Klang Valley Region, the areas around the existing train/bus station have not been developed as a transit oriented development. The Master Plan for Putrajaya was conducted before the term 'transit oriented development' was introduced by Peter Calthrope in his 1993 book "The Next American Metropolis", therefore land surrounding Putrajaya Station is either vacant or used as car parking area by the employees of surrounding institutions including the nearby Putrajaya Hospital and the National Cancer Institute.

Future Putrajaya as a sustainable and intelligent city should offer an urban pattern of well-planned communities characterised by integrated land uses, supported by a network of accessible and convenient centres and transit corridors close to residential areas and employment locations. The vacant and underutilised land around the existing Putrajaya Station should be developed as a mixed use transit oriented development offering rich choice of residential, retail, and commercial uses. Such transit oriented development centred on the major transport hub could become the new retail/commercial centre of Putrajaya. ■

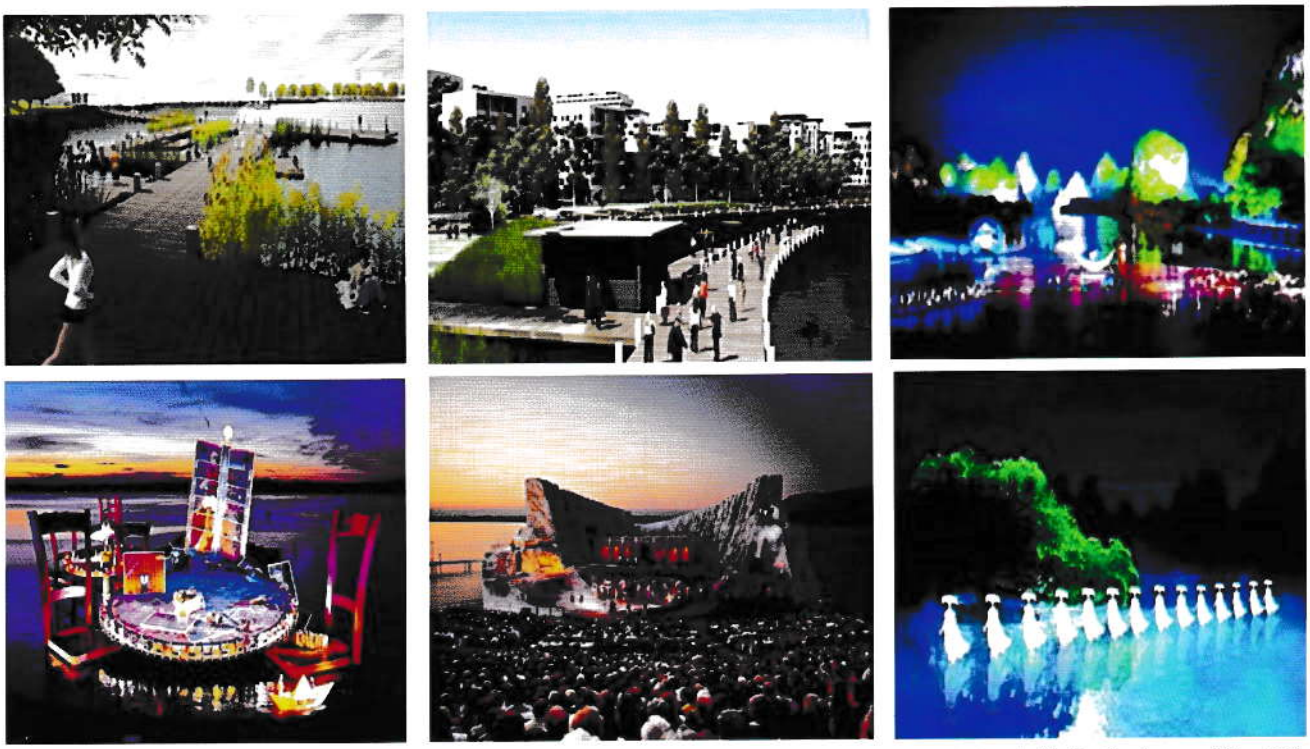
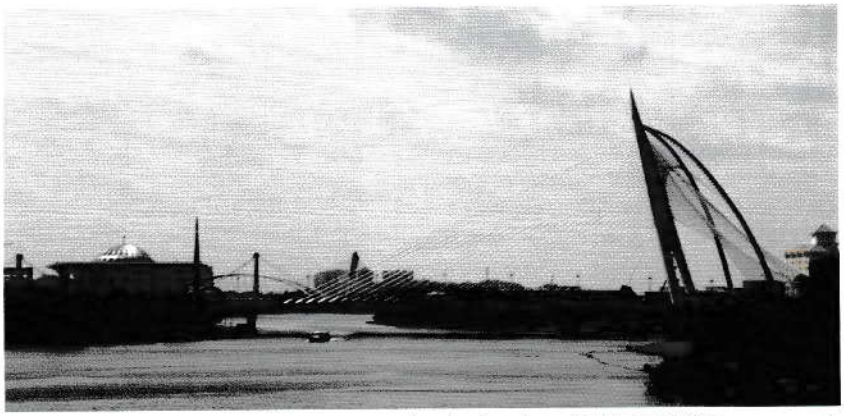


Figure 2 City to Lake Project, Canberra (above). Liu Sanjie show on River Li in Yangshuo County, City of Guillin, China (middle) 'Opera on the Lake' Festival on Lake Constance in Bregenz Austria (below) could serve as inspirations for similar events on Lake Putrajaya. Sources: Urban Design Forum, Australia, MacroPlan Dimasi, Visit Our China, Yangshou Holiday, Stunningstuff Word Press

CREATING A NETWORK OF TRANSIT ORIENTED COMMUNITIES

As a result of its location in the Multimedia Super Corridor and the development of the fast train network, Putrajaya is very well connected to central Kuala Lumpur and the Kuala Lumpur International Airport. However there is no efficient public transport system linking the 20 precincts of the city making Putrajaya an almost totally car dependent environment. The current bus network system operated by Nadiputra Bus Service provides transport between various precincts of Putrajaya and Cyberjaya and the Putrajaya Station. However the system has limited inter-precinct connections and also a low trip frequency.



An Overview of GBI Assessment Tool for Township

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Over the past few decades, numerous building environmental assessment tools have been developed for the building sector to help decision making and improve the environmental performance of buildings and building stocks. However, the requirements for the assessment tools of buildings have increased, assessing building components or separate buildings is not enough. Due to a rapid increase of urbanisation, the neighbourhoods, built environment, public transportation, and services should be considered simultaneously.

Hence, currently, the focus is on developing assessment frameworks and tools that consider sustainability for entire communities, neighbourhoods, districts, or townships (see Table 1).

The Green Building Index (GBI) Township tool and its framework sets out a vision for sustainability within the built environment which provides guidance to assist State and Local Authorities, developers, builders, and professionals to deliver sustainable townships and communities. A total of 100 points are available and distributed in six categories (see Figure 1). These categories are the broad topics of concern to township sustainability. The most significant category within the tool is "Community Planning and Design", which emphasises the need to provide more liveable and diverse neighbourhoods. Each category has a number of criteria allocated with pre-weighted points (total number of criteria is 45). These criteria are parameters used to evaluate the contribution of a project to meet the required objective. Each criterion has, in turn, one or more indicators which are variables that provide specific measurements. This can be better explained through an example: "climate, energy and water" is one of the main categories which includes "heat island design principles" as a criterion that can be measured by indicators such as "percentage area of open spaces", "percentage area of shaded public spaces and footpaths", and etc. The maximum point available for each criterion

TOOL'S NAME	DEVELOPER	COUNTRY	DEVELOPMENT DATE
BREEAM Communities	Building Research Establishment	UK	2009
LEED for Neighbourhood Development (LEED-ND)	US Green Building Council (USGBC)	US, Canada, and China	2009 (pilot 2007)
CASBEE for Urban Development (CASBEE-UD)	Japan Sustainable Building Consortium (JSBC) and Japan Green Building Council (JaGBC)	Japan	2009 (pilot 2006)
Green Mark for Districts	Building and Construction Authority (BCA)	Singapore	2009
Qatar Sustainability Assessment System (QSAS)	Gulf Organization for Research and Development (GORD)	Qatar	2010
Neighbourhoods Green Building Index (GBI) Township	Malaysian Institute of Architects (PAM) and the Association of Consulting Engineers Malaysia (ACEM)	Malaysia	2011
Green Star Communities	Green Building Council of Australia (GBCA)	Australia	2012

Table 1 Some of the most well-known community sustainability assessment tools

Management and Avoidance" criterion, to as high as eight points, for the criterion of "Green Transport Masterplan". This explains the number of maximum points available for each category, as shown in Figure 1. Points are awarded to each criterion according to their performance and they are added together to produce a single overall score. The township is rated on a scale of Certified (50 to 65 points), Silver (66 to 75 points), Gold (76 to 85 points) and Platinum (86 or more points).

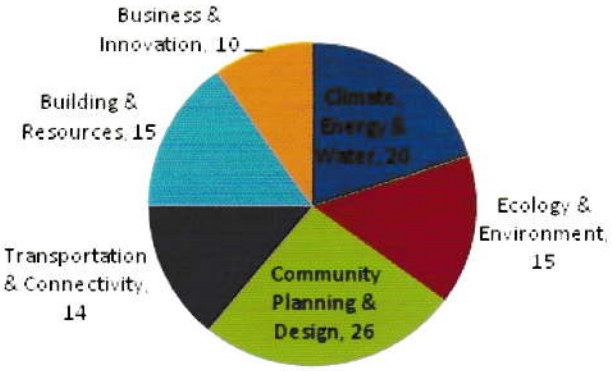
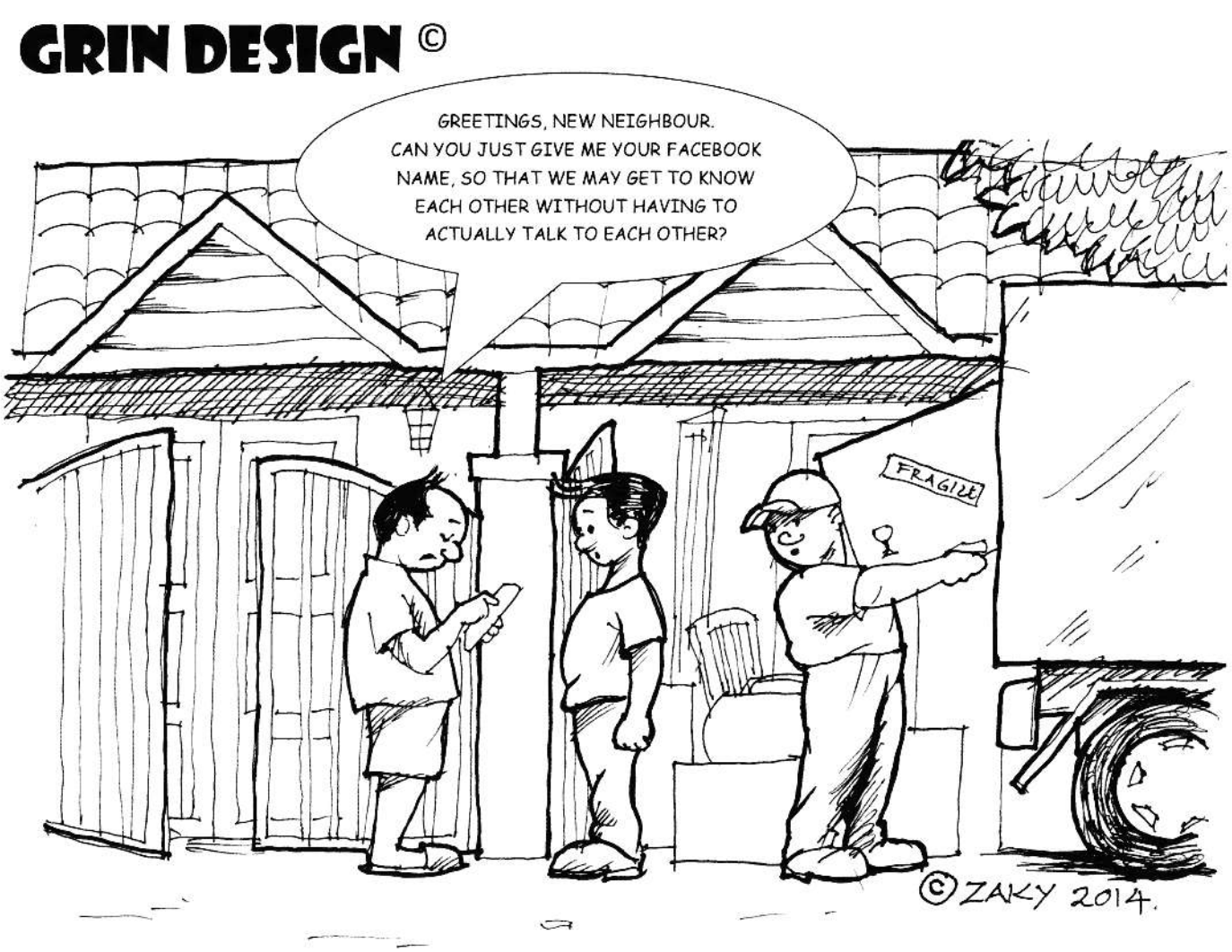


Figure 1 GBI Township six core categories and points allocation

Since the central to most of the definitions of sustainability is the integration of environmental, social, and economic dimensions, it is necessary to review the sustainability coverage of GBI Township tool. Most of the criteria (25 out of 45, or 51% of the points available) within the tool are related to resources and environment and pattern and design. In line with LEED-ND and BREEAM Communities, GBI Township tool has also included many criteria (8, or 19% of the points available) addressing social and community well-being such as affordable housing, community diversity, universal design, community outreach, and governance. It is also acknowledged that GBI Township included criteria related to security and public health through planning and design, which are ignored in LEED-ND and BREEAM Communities. However, criteria associated with local employment, finance and economy have not received enough attention by the GBI Township.

It should also be mentioned that there is one issue about GBI Township that needs further attention. It should be noted that the inclusion of a specific criterion in the assessment system does not guarantee its implementation, and there shoud be other mechanisms for enforcement. This issue has been addressed by LEED-ND and BREEAM Communities by specifying certain criteria as mandatory or prerequisites. These criteria are considered highly important to be complied with to ensure that the minimum sustainability requirements are met. GBI Township however, does not have any mandatory criteria. For example, to be sustainable, one of the GBI Township's criteria requires a minimum of 50% of total building development gross floor area to be GBI certified using any of the GBI tools family. Since, this requirement is not mandatory, it means that a township may still receive a sustainable status or certification even though none of the buildings in the township receives any green certification. ■



The Beddington Zero Energy Development (BedZED), completed in 2002, is the UK's first large-scale mixed use sustainable community. A quick visit on the 7 March 2014 to BedZED revealed a matured neighbourhood with innovative and creative solutions to achieve sustainable development. Gentle curved roofs with solar photovoltaic (PV) panels and colourful wind cowls, large expanse of glazings against brick and timber facade, and pockets of courtyards and roof terraces portray an elegant and distinguish image compared to conventional mass housing.

With a mixed of homes and office spaces, BedZED was initiated by sustainability experts BioRegional and architects ZEDfactory, and developed by housing association Peabody. It is located in the London Borough of Sutton, near to Hackbridge railway station.

Developed on a 1.8 hectare brownfield site, BedZED is a high density development at 100 homes per hectare. Of the 100 homes, 50% are for sale or rent, 25% for shared ownership, and 25% is social housing for rent. Approximately 220 people live in the neighbourhood and another 100 people work here. BioRegional, ZEDfactory and a Community College are among the establishments located in the development.

Beddington Zero Energy Development (BedZED)

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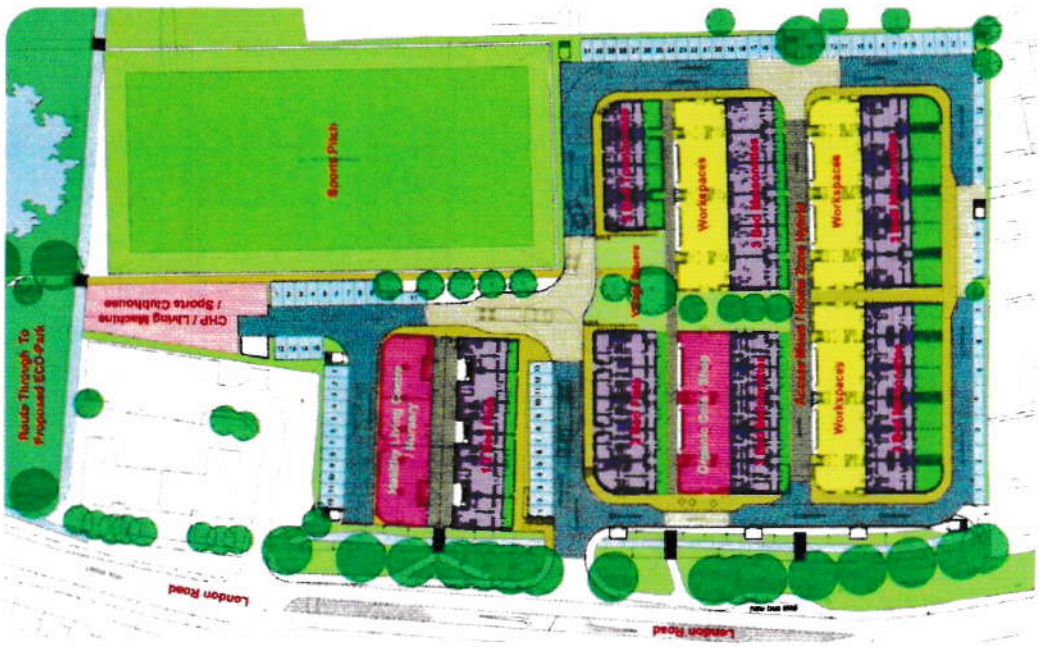


© Zedfactory.com

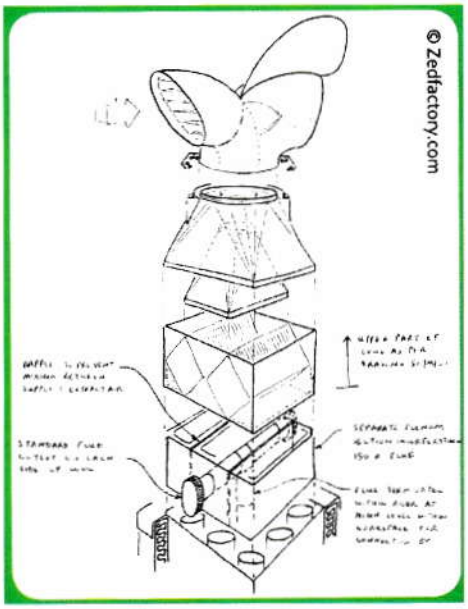
Original site plan.

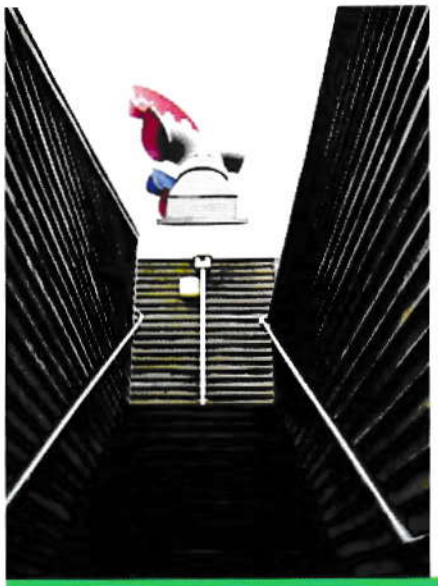
Among sustainability strategies employed in BedZED are:-

© Zedfactory.com

Energy Efficiency

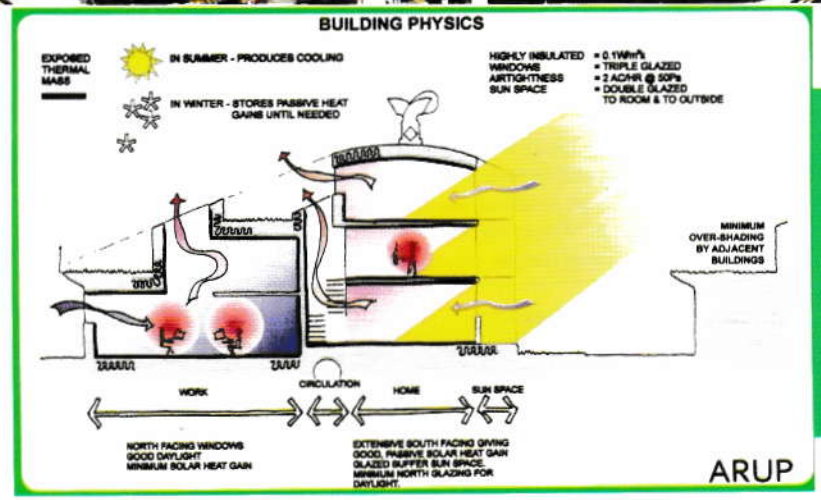
Homes are kept at comfortable temperatures using basic passive architectural techniques such as solar gain, high levels of insulation and effective air tightness. Extensive south facing glazing give good passive solar heat gain and minimum north glazing provide ample natural daylighting but minimal solar heat gain. The colourful wind cowls provide wind powered ventilation which supply fresh air without using any electricity.





Zero Carbon Energy

BedZED was designed to be powered by 100% on-site renewable energy. The roofs carry extensive solar PV panels which provide up to 20% of the electrical demand. The remaining electricity was supposed to be generated from a heat biomass combined heat and power (CHP) unit. However due to some planning constraints and the company maintaining the CHP ceased operation in 2005, the CHP unit is currently not in use. Peabody and BioRegional are currently working to replace the CHP with probably a biomass boiler.



Sustainable Materials

Sustainable materials – The carbon footprint of materials were measured and reduced by 25% with little extra cost. Reclaimed, recycled and local materials were prioritized. About 98 tonnes of steel reclaimed from Brighton railway station was reused at BedZED, while new timber used is FSC certified.

Translocating A Traditional Timber House

Rumah Tiang Dua Belas Terengganu

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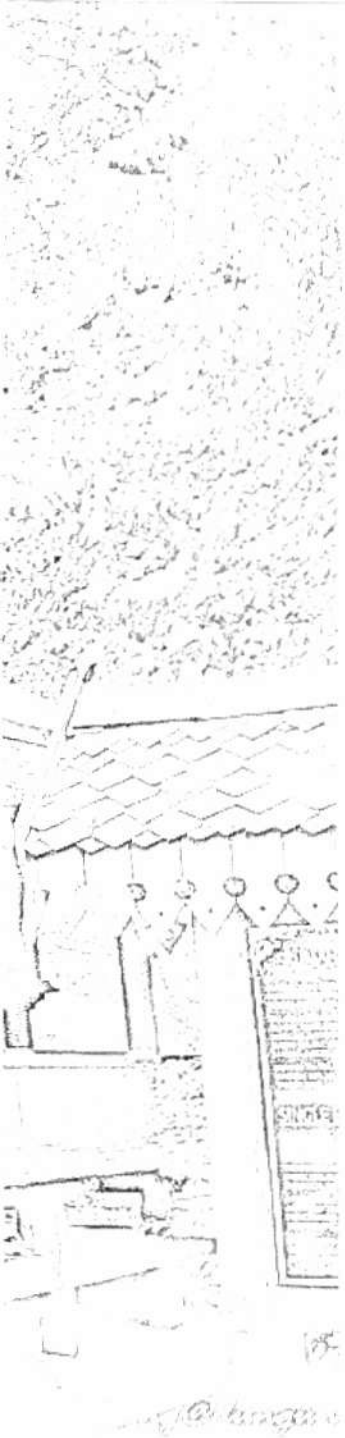
An interesting characteristics of the Malay timber house is its readiness to be dismantled and reassembled. The ability of these structures to be dismantled and reassembled has been demonstrated time and again all over the country. The latest being the project undertaken by Muzium Warisan Melayu, UPM.

Figure 1 The original house is obscured by makeshift utilitarian kitchen to the front.

Muzium Warisan Melayu recently managed to acquire an old timber House in Terengganu, to be transported to UPM. Upon Invitation from the museum, the author took the opportunity to be part of the team to gather as much information as possible of the translocation process. This is the third traditional house acquired by the Museum. The first two were from Negeri Sembilan and Perak.

There were four teams from UPM invovled in this expedition; The museum team which includes the director and 5 workers; IDEC, whose task is to shoot a documentary; the author and Puan Wan Srihani, as researchers from the Depatment of Architecture, UPM; and the Marketing and Corporate Communication (MARCOMM) UPM which handle the media event.

The house is situated in Kampung Tanjung, a soon to be demolished village not far from the famous Pasar Payang. When we reached the site, it looks more like a densely packed squatters housing than an idyllic rural area. When the Project Leader Dr Muhammad Pauzi Abd Latif, showed us the house, we could not see much of a traditional Terengganu timber house, rather an ordinary utilitarian timber construction (Figure 1). The house was using zinc roof for the



most part, only a portion of it still use the original senggora tile, made of clay. This modification was made due to the original tiles being blown off during a heavy storm.

However soon we realised the rumah tiang dua belas is covered at the front by a new timber kitchen. The first day is spent demolishing the new extension. Only when the kitchen is pulled down can the original construction be seen. According to the collector, Dr Fauzi, the house is also called rumah bujang berselasar. Its called rumah bujang because there is no room in the main house. However, we found that the owner had already put up a partition closing off one section of the main house. The 'selasar' is actually an intermediate platform in front of the house, elsewhere called a 'serambi'. (Figure 2) The house were using zinc roof for most part of the house, only a portion of it still use the singgora tiles which survived a heavy storm.

This type of house, which is called rumah tiang dua belas, is a traditional timber Malay house in the state of Terengganu. Its architectural feature resembles much of southern Thailand's traditional architecture. A question which might boggle readers is as to why this type of house is called Rumah Tiang Dua Belas or "Twelve Columns House".A glance from the exterior showed the house is supported by 28 columns. These are arranged in seven rows of four columns each. Only when the wall panels are taken off, it is clear that only twelve of these columns reach up to support the roof. They are the columns in both outer most rows, and the middle row.

Unlike houses from other states, a unique feature of the houses in Kelantan and Terengganu is the large paneled walls. In effect, the wall panel is a massive jigsaw puzzle of small solid panels inserted in between delicately carved battens (Figure 3). It amazes the author as to the quality of the assembly that were made by the craftsmen long ago using very basic tools.

An ideal way of taking the wall panel down is by taking the whole panel intact. However this means we need a crane to lift the large panels, especially the longer sides, which extend 23 feet in length and six feet high. However, to use crane in this project is impossible as the house is situated in the middle of densely packed housing quarters. The distance from the nearest house is a mere one and half meters. Eventually, the workers have to take it off panel by panel, a difficult task as the peg are bolted tight and as hard as nail.

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Figure 2 After the demolition of the new extension, the front of the house is revealed. The Selasar (Platform), in this examples has been cut in Half to make way to access the undercroft.

Figure 3 The wall panel is a massive jigsaw puzzle of small solid panels inserted in between delicately carved battens.

Figure 4 When the wall panels are removed, the twelve columns are visible, hence the name 'Tiang Dua Belas'. The front two columns in this picture are supporting theroof for the selasar and not counted.

when removing the 'pasak' (peg/dowels) that hold the various parts together. The workers had to hammer the peg out with nails. When the peg came out, we could still see the drilled holes were as pristined as they were made years ago. This would have not been the case should the parts are nailed with iron or steel nails.

It took a team of five workers 3 days to dismantle the whole house. Works had to be stopped a couple of hours due to heavy rain. At the end of the three days, the dismantled members were loaded onto a container to be hauled back to UPM. The house will be reassembled in the compound of Faculty of Modern Language and Communication, UPM joining the two other traditional houses relocated earlier. ■

IRDA : Actions for a Low Carbon Future

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IRDA an abbreviation for Iskandar Regional Development Authority has been actively launching projects for the southern corridor of Malaysia, promoting holistic sustainable developments. The Comprehensive Development Plan (CDP) consisted of five (5) flagships were identified as developmental focal points, naming Johor Bharu City Centre (Flagship A), Nusajaya (Flagship B), Western Gate Development - Port of Tanjung Pelepas (Flagship C) and Eastern Gate Development - Pasir Gudang Port (Flagship D). The fifth flagship, which was labelled as "Free Access Zones" were dropped from the plan in 2007. Further effort to promote sustainability in Iskandar Malaysia, IRDA has set targets for low carbon footprints in their developments. IRDA addressed the economic growth, societal development and well-being, and environmental protection and management through the launching of the Low Carbon Society (LCS) Blueprint at COP18 in DOHA November 2013 with over 280 programs that are being put into action.

The actions for the low carbon future have outlined ten (10) priority projects, which will be implemented throughout the Tenth Malaysia Plan (2011-2015). The 10 programs cover components from the theme of Green Economy, Green Community and Green Environment. It is important that adapting and amending practice of doing "green" business promotes stronger and more sustainable process as well as source-efficient. The 10 programs to advocate low carbon emission region as well as changing for a better lifestyle have been outlined in their book "Iskandar Malaysia's Actions for a Low Carbon Future" as the first of many series of 281 programs. The programs are as follow:

1. Integrated Green Transportation - Mobility Management System
2. Green Economy Guidelines
3. Eco-life Challenge School Projects
4. Portal on Green Technology
5. Trees for Urban Parks
6. Responsible Tourism and Biodiversity Conservation
7. Bukit Batu Eco-community
8. GAIA - Green Accord Initiative Award
9. Low Carbon Village FELDA Taib Andak
10. Smart City - Nafas Baru Pasir Gudang as Green and Healthy CitY

The rise in global warming and climatic dilemma is known to be caused by human activities by their rapid developments. Due to this predicament, IRDA has defined a strategic environmental policy referred as the Green Focus Agenda that considers land use to social engineering and service provision as part of their management of natural resources and sustainable developments. The actions listed below are slowly taking place transforming the environment, lifestyles of society, industrial management and resources as well as economic development into a comprehensive strategy.

INTEGRATED GREEN TRANSPORT: MOBILITY MANAGEMENT SYSTEM (MMS)

The first priority action in reducing the emission of carbon dioxide (CO2) is to ensure that the community would use public transportation. In order to change their attitude and behaviour, a well-coordinated and sustainable transportation management should be established. In this Iskandar Malaysia Mobility Management System (IMMMS) synchronises information, services and activities related to it by making it accessible through computers and smart phones. This would allow all citizens even visitors to plan their travelling time and mode of transportation within Iskandar Malaysia region according to their schedule.

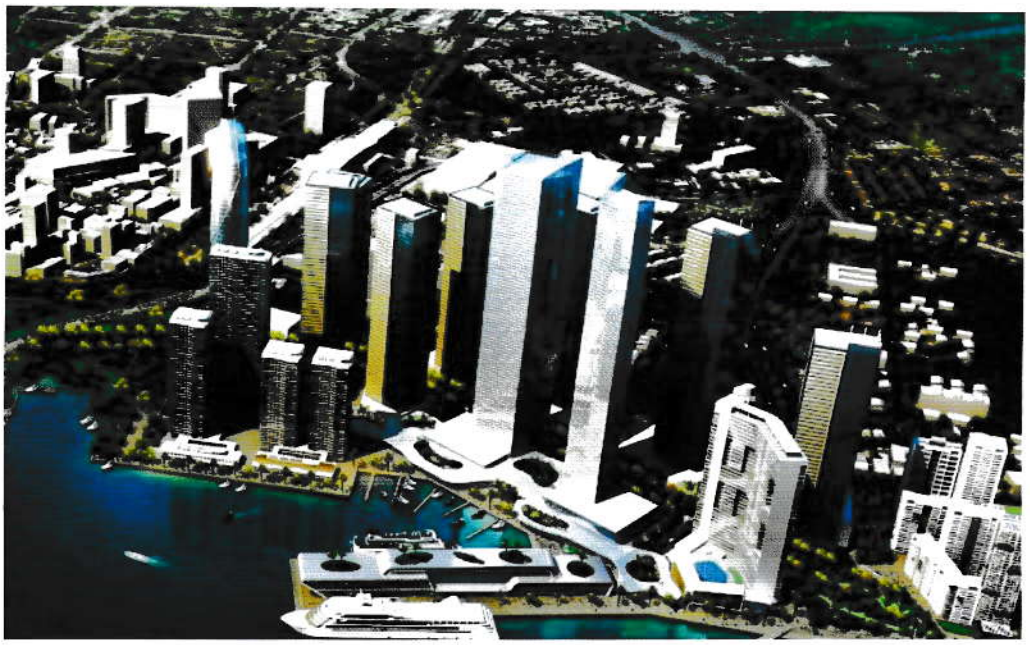
The features of IMMMS include trip and journey planner, ride sharing, para-transit, school bus, lifestyle, social media integration, event transit planner and green lifestyle reward points. With all of these coordinated in one platform, MMS would be able to achieve substantial carbon reductions in the region.

Low Carbon Society Blueprint

Figure 3: The actions listed in the Low Carbon Society Blueprint

GREEN ECONOMY GUIDELINES

Green Economy is described as a mechanism to nurture economic growth by reducing environmental risks on the natural assets. It looks into management of sustainable waste treatment, access to water and energy and controlled pollution. Companies and businesses that nurture green economy will be awarded soft incentives and innovative initiatives by GAIA (Green Accord Initiative Award). GAIA will highlight building development that considers creative technologies that apply renewable energy and being energy-efficient. GAIA would be using recognised international rating tools such as GBI, Green Mark, BREEAM and CASBEE as the foundation to assess and identify such attempts. Under this guideline, actions 1-5 (refer Figure 3) are very much involved in order to achieve Green Economy. IRDA will be partnering with businesses, local government agencies, universities, NGOs and communities in this region to develop and adapt the Green Economy Guidelines that inspect procurement, operations and supply chain management in order to reduce the impact on the environment, while the living communities would be prompted to conform clear actions on the 3R lifestyle. The timeframe to implement such actions and be able to measure its success is up till 2025.



In reducing climate change at local level, forests are restored through replanting programs in urban parks and city forests. This is to provide green lungs and for the urban areas and engaging biodiversity back. In 2012 a coastal village, known as Kampung Sungai Melayu has began actively involved in restoring mangrove forests.

ECO-LIFE CHALLENGE PROJECT

It is found that 27.26% of IM's population consists of children and youths ranging between 5-19 years old. Hence, a green community requires a partnership with these younger generation through education programs either as part of their school curriculum or non-curriculum techniques. Modelled on a Kyoto City program – Eco-Life Challenge program acts as a supplementary that provides contextual learning, system-thinking in changing lifestyle and mindset towards low-carbon future through energy consumption, waste generation and using renewables. Bukit Batu and Felda Taib Andak were chosen to be the first to lead such eco-community projects by using energy-saving appliances, implementing 3R concept and creating green products. Development of Pasir Gudang as an industrial city in the east of Iskandar Malaysia requires many of the manufacturing and industrial hubs to be smart in their resource-planning and management. The program is called Nafas Baru Pasir Gudang (NBPG) with the objective to revive the area for a cleaner, greener, healthier and more vibrant city.

There are many more of IRDA's programs that have been executed since 2013, which is not listed in this short article. A few that is actively implemented such as Green Portal for online platform where communities, government, businesses, public and all can obtain information on green technology and environment; Trees for 'Urban Parks' that reintroduce green lungs into the cities for recreational places not only for human but also animals; Responsible Tourism Development and Biodiversity Conservation has an overall theme of eco-tourism projects that are led by community in the area and many more.

The continuing effort of IRDA to educate, implement and upgrade the southern region of Malaysia to a level where a more sustainable living and developments can be seen as strategies that cannot happen overnight. Such careful and well-coordinated planning among government agencies, communities, businesses and industries requires a certain time frame in order to measure their success. The year 2025 is chosen to quantify the regions maturity and success of the Low Carbon Future Blueprint. It is hope that positive results can be seen with all the resources spent to establish such actions. ■

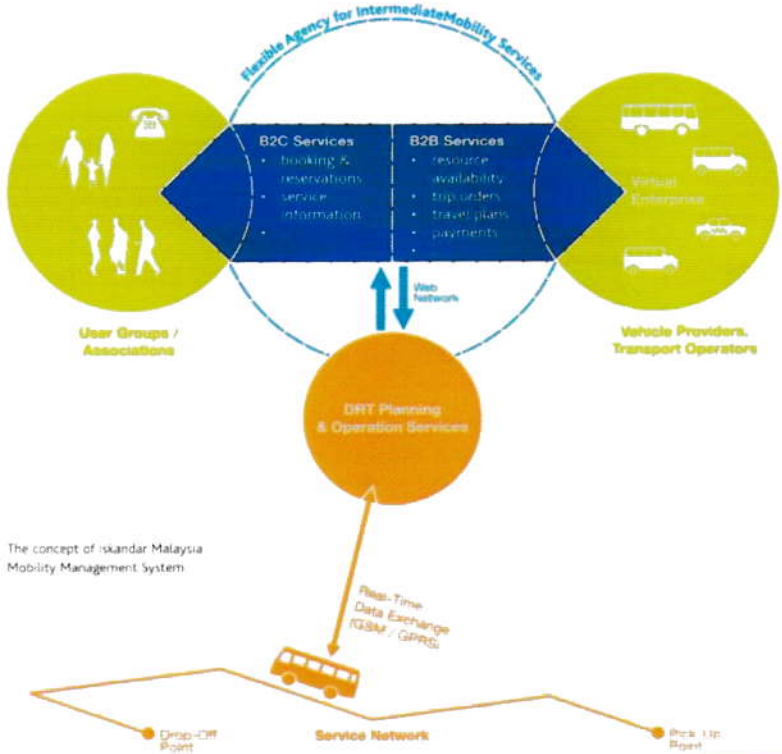


Figure 4 The concept of Iskandar Malaysia Mobility Management System
Source: Iskandar Malaysia Actions for Low Carbon Future (2013)

Figure 5 Timeframe and actions involved in the implementation of Green Economy
Source: Iskandar Malaysia Actions for Low Carbon Future (2013)

Figure 6 Eco Life Style Process
Source: Iskandar Malaysia Actions for Low Carbon Future (2013)

PAST NEWS

Workshop on Islamic Architecture: Housing From Islamic Perspective - 31 October 2013, UPM

This workshop received 23 participants, mostly from the higher education institutions and took place at the Faculty of Engineering, UPM. The invited speaker was Prof. Dato' Ar. Dr. Asiah Abdul Rahim, the Director of KAED Universal Design Unit (KUDU), International Islamic University Malaysia (IIUM).

This workshop discussed about the characteristics that should be taken into account when considering housing design according to Islamic values and perspective.

For a one-day workshop, this workshop also gained attention from non-Muslims participants and it showed that Islamic Architecture is universal.

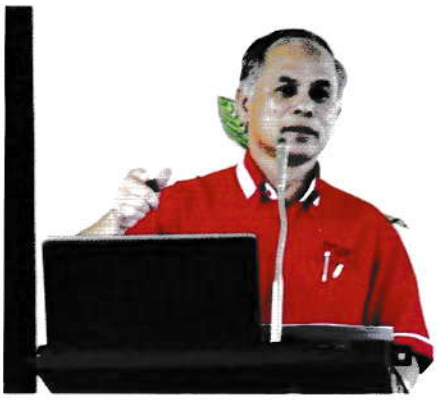
One-day Training Workshop on Management Skills for Administrative & Financial Executives - 14 April 2014

A workshop on management skills was organised by HRC at the L'Apprenti UPM, attended by participants from UPM and some government agencies.

HRC invited two prominent speakers for the workshop. During the morning session, Prof. Dato' Ir. Abang Abdullah Abang Ali, the Head of HRC was given the honour to speak on management skills.

While, during the afternoon session, the Dean from the Faculty of Modern Languages and Communication, Prof. Madya Dr. Abdul Mua'ti @ Zamri bin Ahmad, talked about the skills of communication.

***Kursus 5S dalam Pengurusan Rekod dan Fail* - 30 April 2014**



HRC also organised a course on the 5S in record and file management. This workshop was held for one day at the Faculty of Engineering, UPM.

The course was conducted by a speaker from Malaysia Productivity Corporation (MPC), Tn. Haji Wahab. There were 34 participants from UPM, government bodies and local organisations.

***Kursus Pemantapan Setiausaha: Personaliti Pencetus Inspirasi* - 7 & 8 May 2014**

The latest activity and training conducted by HRC was, Kursus Pemantapan Setiausaha (a workshop for secretary). This workshop has been successfully held at the L'Apprenti, UPM and attended by 19 participants.

For this workshop, HRC has invited a well-known image consultant from CuteCarry, Mr. Hafiz Mustapha. The 2-day workshop held many interesting sessions that not only included practical interactive session from the invited guests.

Besides discussing about image management, this workshop included a session on how to wear hijabs and make-up. A free tutorial has been given to all lucky participants.

This workshop received good feedbacks and if there is more demands, HRC will organise similar workshops next time. ■