

**THE INTERNATIONAL AWARDS
FOR LIVEABLE COMMUNITIES 2012**

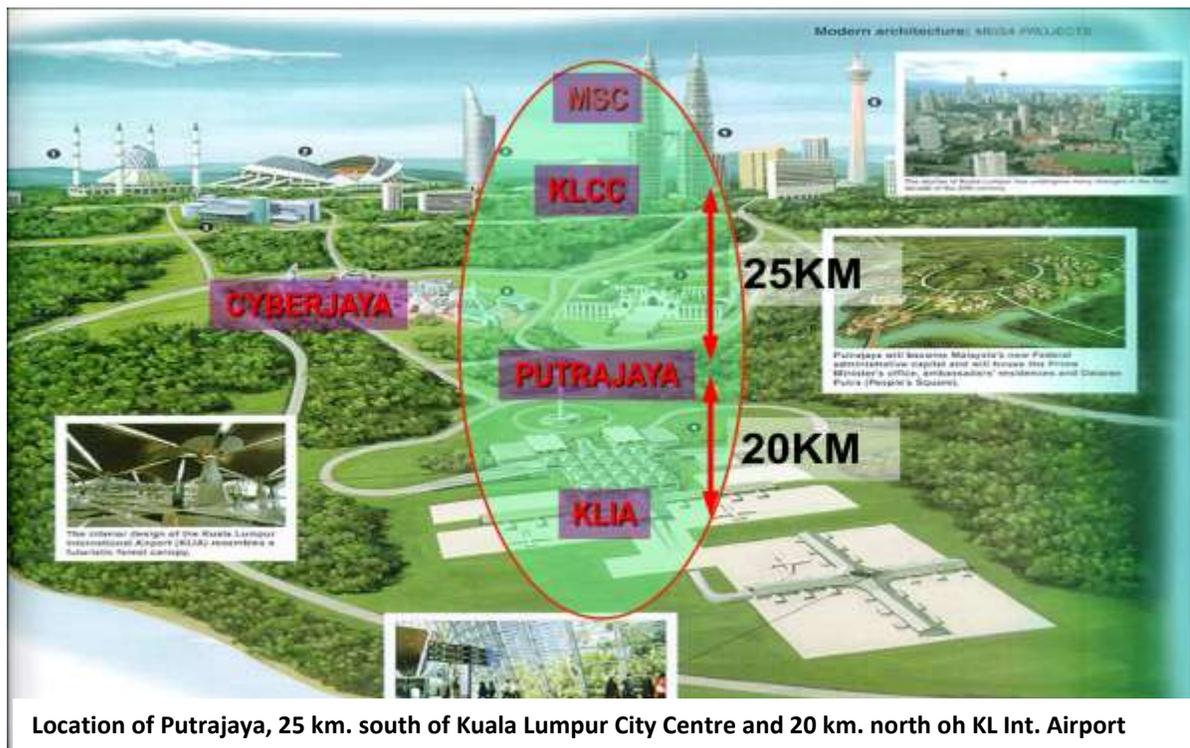
**PUTRAJAYA, MALAYSIA:
WHOLE CITY AWARD**

Putrajaya Corporation

June 2012

1.0 THE CITY OF PUTRAJAYA, MALAYSIA

Putrajaya is a new town planned as government administrative centre of Malaysia. The location is about 25 km. southwards of the capital city Kuala Lumpur. The construction of Putrajaya started in late 1996 and in June 2012 all ministries except MITI (Ministry of International Trade and Industry), Ministry of Public Works and Ministry of Defence had moved to Putrajaya. Main components of the city comprise government offices complemented with government and public housing, commercial, public amenities and a large proportion of parks and lake.



A site originally rubber and oil palm plantation is now being transformed into a city in a garden. For a city of only 4931 hectares in size it is a big sacrifice to designate almost 40% for parks and lake in pursuit of environmental sustainability against demand for property development. The lake, parks and green open spaces are

connected to all parts of the city creating a quality living environment and boost the value of property compensating the loss of land for the use.



View of Putrajaya

Later in 2009, Putrajaya has been declared by the Malaysian government to be the pioneer Green City in response towards the global effort towards reducing carbon footprint. The emphasis now is not limited to providing green and blue spaces and also tree planting but goes beyond changing the life style of city dwellers, developers and other stakeholders to practice green. Nevertheless, the prominence of green and blue areas in its physical development will enable Putrajaya to achieve a balanced and sustainable city eco-system.

The building up of community started in June 1999 when 40 families moved in together with the fourth Prime Minister of Malaysia, Tun Dr. Mahathir Mohamad to Putrajaya reaching to more than 80,000 residents now (June 2012) with a day-time population estimated of up to 150,000 people.

2.0 ENHANCEMENT OF THE NATURAL AND BUILT LANDSCAPES

Key Features of Putrajaya Landscapes

The sympathetic relationship between the built and natural landscape is evident through the lush greeneries surrounding buildings, infrastructure, parks and gardens. 12 metropolitan parks are planned for the city with different themes and functions and all except 2 were completed and had been open to the public. A man-made lake together with constructed wetlands of Putrajaya is another important feature of the city.



**Constructed Wetlands
Of Putrajaya**



Protection of Natural Heritage

Protection of the natural heritage and of ecologically important sites and biodiversity is evident in large public parks such as the Wetland Park where more than 70

species of wetland plants thrives. Today the Putrajaya ecosystem carries no less than 195 species of birds and small mammals which swell from a mere 34 species in 1995 wildlife survey prior to the development of the city. Another example is the Agricultural Heritage Park where 72 original clones of rubber trees (*Hevea braziliensis*) planted in the 1950's for research purposes and later distributed for planting throughout the Peninsula Malaysia then known as Malaya or the Malay Sultanate. The clones still stand today and are protected for their heritage value as evidence of the important history of rubber as trade commodity which drove the local economy as the world's largest exporter of rubber in its heyday.



Rubber tapping demonstration at Agriculture Heritage Park

Introduction and establishment of indigenous vegetation and tree species in the equatorial climatic region has its limitations due to poor soil conditions especially in areas where the terrain had been cut to establish friendly gentle slopes for human habitation. Various soil amelioration and improvement has been done to sustain good tree growth in the more difficult environment. *Taman Rimba Alam* or the Nature Forest Park is the pride of Putrajaya where close to 100,000 individual trees from over 460 species of indigenous tree species had been planted in a reforestation project of an area where oil palm estate once was. The park now carries 88 of 155 species of Dipterocarp trees, which has been proven to contain up to 93% carbon of their total mass.



Nature Forest Park

Wetland and Lake were designed and constructed as part of an environmentally friendly ecological system to cleanse polluted water in-flow into the city area and as climate moderator respectively. The lake water quality has achieved the target quality of Class IIB that is safe for recreational use and body contact for the last 10 years.



Dragon Boat Race at Putrajaya Lake

3.0 ARTS, CULTURE AND HERITAGE IN PUTRAJAYA

Multi-ethnicity and multi-cultural Malaysia offer a fascinating mixture of culture that is truly Asian. Spirit of Asian is transformed into unique mix of culture that is Malaysian. Malay, Chinese, Indian and Borneo are the 4 major races in Malaysia that formed the foundation of music, dance and cultural performances. Majority of residents in Putrajaya at present are Malays and therefore the arts and cultural show and performances are closely influenced by the Malay traditions. Nevertheless, the traditions of other ethnicities were also portrayed.



Traditional dance performance

Arts and cultural activities are carried out at school and community-based as well as at city level programs. This is part of continuous effort to encourage participations in respect of arts and culture among the community and enhanced through arts and culture workshops. Malay classical dance and song are often the central theme of the show. A few residents association have formed the cultural groups such as *dikir barat* and *kompang*. *Dikir barat* is a traditional performance born in the state of Kelantan in east coast of Peninsular Malaysia while *kompang* is traditional drum that has Arabic influence.



Water colour painting lesson

Apart from interesting arts and cultural performances, buildings, road furniture, lamp posts and bridges are distinctively design with elegant architectural languages lining up the boulevard and streets of Putrajaya to form the cityscape. The architectural themes combined contemporary and traditional style. As an example, Putrajaya International Convention Centre (PICC) is an exclusive design inspired by the shape of the eye of a silver Malay royal belt buckle named '*Pending Perak*' with the "folded-origami" roof style to alleviate the plain roundness of the structure.



Night view of Putrajaya

Arts and culture can be found in the design of buildings in Putrajaya. Though modern and contemporary, designers must be able to demonstrate the form, image and facade of their building with respect to the local culture and climate. These elements of control have characterised the cityscape to become unique and different from other cities of the world. The intermingling of lush green and colourful landscape with unique architectural buildings creates a very attractive environment. Buildings in the Central Business District are also mandated to be installed with facade lighting according to the guidelines to avoid night glow and light pollution.

The city lighting plan is designed to emphasize lighting on buildings and structures identified as landmarks of Putrajaya. This will eventually present an even distribution of lighting intensity throughout the city with focal and nodes as landmark with the brightest light. Weather conditions in Malaysia can be quite unbearable during day time because of the heat and humidity and night time will be the best hours to enjoy city atmosphere. With good lighting practices, Putrajaya is the place for people with their families to come and appreciate the beautiful city scenery enhanced with carefully decorated light.

4.0 ENVIRONMENTAL BEST PRACTICES

In 1994 before the start of Putrajaya development, an Environmental Impact Assessment (EIA) Report as required under the Law was prepared and approved by the Government. It laid the foundation for good Environmental Best Practices to be implemented. For implementation and control during planning and design, construction and operational stages a detailed Putrajaya Environmental Design Guidelines was prepared and followed strictly. Apart from environmental guidelines a set of comprehensive guidelines for Putrajaya development were also prepared to ensure best practices in other fields. Among others are Urban Design Guidelines;

Irrigation Master Plan; Lighting Master Plan; Utilities Master Plan; Lake Use and Navigation Master Plan; Detailed Urban Design Guidelines; Fencing Policy & Design Guidelines; Signage & Advertisement Design Guidelines; Storm Water Management Design Guidelines; and Putrajaya Lake Catchment Development & Management Plan.

After more than 15 years since the start of construction in late 1996, Putrajaya has taken shape to be a city in a garden. Lush greeneries and healthy grown trees intertwined within the residential, offices, amenities and other parts of the city supplemented with 600 hectares of wetlands and lake water body are the result of careful planning and best environmental practices. As a model city the government then decided in 2009 that Putrajaya should be turned into pioneer green city to be emulated by other towns in the nation.

Green City initiatives

Based on the city in a garden and intelligent city concept, Putrajaya is meticulously planned and developed with the emphasis on the environmental conservation as well as the efficient use of natural resources. The planning and development concept incorporated in the Putrajaya Master Plan has provided a concrete path for Putrajaya to move forward.

7 focus areas in the implementation of Putrajaya Green City initiatives are as follows:

- i. Planning, urban design and building;
- ii. Integrating nature into the built environment;
- iii. Energy usage;
- iv. Water usage;
- v. Transportation and mobility;
- vi. Waste management and

- vii. City administration and management.

i. Planning, Urban Design and Building

Integrated neighbourhood centres are planned to be self contained complete with amenities and are linked with extensive network of pedestrian walkways and cycle ways to encourage walking and cycling. These measures are expected to help reduce carbon emission arising from the use of motorised transports. Policies and measures to intensify and diversify the use of land along main transportation routes and transit points are also introduced

While construction and retrofitting of existing buildings to be green certified buildings will be encouraged and mandated in the effort of reducing carbon emission arising from their activities and operation. Another green feature that has been implemented is the compulsory use of chilled water from centralised district cooling plants for air conditioning of building within the city centre.



Energy Commission Building – Certified as Platinum Green Building

ii. Integrating Nature into the Built Environment

Almost 40% of Putrajaya is designated as green and open spaces, lake and wetlands and these green and blue spaces function as carbon sink and micro climate moderator for the city. These can be exemplified from the constructed wetland which functions effectively as a natural filtration system for the lake water while at the same bio diversity has proven to thrive successfully.

iii. Energy Usage

The government has introduced a programme to reduce energy consumption by 10% for government buildings in Putrajaya through continuously energy monitoring via building automation system, energy management and awareness programme. On the use of renewable energy sources, the national electricity provider *Tenaga Nasional Berhad* will be implementing a large scale showcase 5MW grid-connected solar photovoltaic (PV) solar farm project.

iv. Water Usage

In Putrajaya, a city wide rain water harvesting programme has already been implemented via the construction of the man-made lake that functions as an effective large scale water retainer system from which the lake water is used for landscape irrigation purposes. Treated water from sewerage treatment plant is also planned to be recycled for landscape irrigation.

v. Transportation and Mobility

The transportation system planned for Putrajaya is based on the policy of modal split of 70:30 between public and private transportation with the rail based system forming the back bone. The rail based system has yet to be implemented because of low ridership and as an interim solution a fleet of 175 buses running on natural gas are currently operating within the city ferrying about 4 million passengers in 2011.

vi. Solid Waste Management

Putrajaya 3R (Reduce, Reuse, Recycle) Program implemented since 2004 has shown a considerable success with almost 10% of total waste is recycle. At present,

Putrajaya is actively seeking to reduce total waste disposed at landfill through provision of permanent 3R facilities within residential areas and government offices as well as setting up of mobile 3R facilities providing easier accessibility for recyclers.

vii. City Administration And Management

Extensive use of online services will reduce usage of paper as well as the need to travel. Among the online services provided are a variety of “e-payment” services as well as online booking services for public amenities and online application for planning and development plans approvals.

Putrajaya Green City 2025 (PGC2025): Baseline and Preliminary Study & Putrajaya Green City Action Plan

Putrajaya Green City 2025 (PGC2025): Baseline and Preliminary Study was completed in 2011. PGC2025 is a preliminary study to assess the current state of the city in terms of its CO₂ emission and to offer suggestions in terms of broad targets or counter measures to reduce emission by 2025. The study has calculated CO₂ emission baseline for Putrajaya for base year 2007 and calculated the emission level for the ‘business as usual case’ (BaU) for 2025. In order to reduce the emission level by 2025, the quantitative environmental targets are outlined in three themes as follows:



PGC2025 has recommended 12 broad actions for Putrajaya to focus upon namely:

1. Integrated city planning and management
2. Low carbon transportation
3. Cutting edge sustainable buildings
4. Low carbon lifestyle
5. More & more renewable energy
6. The green lung of Putrajaya
7. Cooler urban structure and buildings
8. Community and individual action to reduce urban temperature
9. Use less consume less
10. Think before you throw
11. Integrated waste treatment
12. Green initiatives & capacity building

Based on the PGC2025 study, the city is now in the process of preparing Putrajaya Green City Action Plan in which the 12 broad actions/countermeasures identified will be detailed out into implementation programmes and initiatives.

5.0 COMMUNITY PARTICIPATION AND EMPOWERMENT

Living up to the expectation of a community of individuals that is multi-racial and multi-ethnicity is a big challenge which requires dedication and commitment from all levels of the community, may it be the local government, community leaders, the city dwellers, non-profit organizations, local businesses and private sectors. In a fast urbanising region with high influx of rural population to cities, the task of driving the community to embrace the green agenda towards creating sustainable society is essential. As a city planned and built to become the administrative centre of the

federal government of Malaysia, Putrajaya was slated to transcend Malaysia with improved quality of life, aspire the country to elevate awareness of community empowerment towards a sustainable society and pave the way for its residents to be part of the city's solution in achieving the Putrajaya Green City 2025 vision.

Touted as one of the most successful planned federal administrative centre by many countries aspiring to move their administrative centre, Putrajaya is proud that its residents has come together to form over 70 resident associations and undertaking the role of community building. A proud group of retired residents has come together to serve the city as invaluable city tour guides. A community residents' association had also started a cottage industry producing bags from used banners and buntings as well as household products from recycled clothing.



Turning used banners into bags

Since 1999 when it was first inhabited, Putrajaya has experienced a tremendous community participation and empowerment in its effort to be the most ideal place to live, work and play. The community members have always been approached for ideas, suggestions and support in the process of seeking for most appropriate decision. The community participate in the finalisation of the Putrajaya Structure

Plan 2025 and the Putrajaya Local Plans. In the process, the community tabled their feedbacks and views on a draft plan before being finalised by the government.

The introduction of Local Agenda 21 (LA21) as a policy tool for implementing local sustainable development, in December 2008 further promotes community empowerment and active participation with and among the community themselves and other stakeholders in Putrajaya. Capacity building in the form of series of community workshops and focus group discussion enable the community of Putrajaya to broaden their perspectives and allow them to generate ideas and understand choices and decisions made by others.



Capacity building seminar

Among the significant achievement is the formulation of LA21 Putrajaya Community Vision, which is a broad general statement as a goal, as follows:-

“We, the Community of Putrajaya will strive in turning Putrajaya into a vibrant, environmental-friendly, and safe city and to ensure that the city has its sense of identity, with knowledgeable residents practicing good values for the betterment of its present and future generations”.

Subsequently, three action plans were developed which covers:

- i) Action Plan For Safe Community Programs;
- ii) Action Plan For Recycle / 3Rs and Environmental Awareness; and
- iii) Action Plan For Community Involvement

Currently, Putrajaya has at least 8 community gardens where residents has been planting vegetables, bananas, herbs and various produce on crop rotation methods. Schools are prolific in their gardening programmes which trigger Putrajaya Corporation to introduce the Green School Awards starting this year to honour the school's effort in promoting environmental programmes amongst their students. Beautiful Garden Awards were introduced and presented to the best home gardens by Putrajaya Corporation since 2005 to honour home owners and residents. An annual LA21 Programme Achievement Awards was introduced in 2011 to honour community leaders and champions to instil pride and inculcate a sustainable green culture in the effort to create sustainable society.

Likewise Putrajaya has a successful 3R programme introduced in 2004 with a strong message to reduce, reuse, and recycle. The community recycles paper, plastics, glass, metal, batteries, dry cells and electronic appliances. Since 2010, the Putrajaya Recycling Centre operates a 3R Boutique selling used clothes and accessories. The city also has a composting program which recycled 15 tonnes garden waste in 2011 and targeting 35 tonnes for 2012 involving composting and production of fertilisers.

Tree planting programmes involving the community, organised by various non-governmental organisation and private sectors and facilitated by the city had taken roots and contributed to more than 3,000 trees planted in 2011. This figure accounted for about 30% the total number of trees planted in Putrajaya for that particular year.

The community of Precinct 9B embark on a LA21 project through the '*Place Making*' movement in the designing and monitoring of the construction of a *surau*, a small mosque in their neighbourhood. The design for the religious building was conceptualized by the community while the Putrajaya Corporation's role is only limited to contributing technical expertise and advice. The funding for the construction of the *surau* is partly supported by the government while the rest is through collection among the community.

Environmental awareness program for school children is a yearly affair carried out for the past 6 years to commemorate world environmental day at a camp site in Putrajaya Wetlands Park in Precinct 13. The 3 days 2 nights camping modules is filled with interesting and challenging tasks for primary and secondary school pupils and receive an overwhelming response from the school children. The main objective of the program is to inculcate care and love of nature and environment among the young. The program is planned to provide knowledge and exposure to sustainable environmental conservation and preservation practices at school.



Environmental awareness program

The modules focus on green finger, green living, green global and green economy as the basis for the activities at the camping site and surrounding. The young students were taught to appreciate, be close to it and love nature in its built environment through live experiments and quiz.

6.0 HEALTHY LIFESTYLE

The population of Putrajaya at present are largely made up of government servants. Majority lives in government quarters which are well-designed and well-equipped with all the basic amenities provided. All public facilities such as praying halls, community halls, schools, markets, shops, parks, playgrounds, clinics and eating places are within walking distance.

Healthcare facilities include a government hospital in Precinct 7, supported by five health clinics located in the busy and populated areas in Precinct 9, Precinct 11, Precinct 3, Precinct 14 and Precinct 18. Private clinics also operate in Putrajaya.

The population of Putrajaya is growing rapidly and health statistics at random recorded in 2011 shows 28% of the population has a normal BMI (Body Mass Index), 36.3 % are overweight, 27.4 % are obese and 8.3 % under-weight. These figures indicate that the people are well-nourished but they need to exercise. To prevent them from further obesity and contacting other related diseases such as diabetes mellitus or hypertension, a program such as Healthy Parks, Healthy People was introduced.

The Healthy Parks, Healthy People program has gained popularity among the residents and people staying in the vicinity. One of the activities of this program is Putrajaya Inter Park Ride monthly cycling which has gathered from 500 to 1000 enthusiasts.



Inter park ride

In Putrajaya, all government buildings, public places or parks, schools, mosques, air-conditioned eating places and all gathering areas are gazetted as non smoking zones. Enforcement by the health authority is carried out all year round.

The food eateries in Putrajaya are inspected at least every six months to ensure that the operators always adhere to hygiene cleanliness and food safety plus quality. All licensed premises are graded accordingly and category cards are displayed to show their status for public awareness.

Health campaigns were carried out regularly to remind the community about cleanliness, hygiene care and the importance of caring for themselves and families as well as keeping the environment in a stable biological condition.

7.0 STRATEGIC PLANNING

Putrajaya Structure Plan 2025

City planning and strategic planning are the key areas of responsibility of Putrajaya Corporation as the local authority and administrator of the new administrative centre of Malaysia. Under the legislation of the Malaysia Urban Planning System, the development plan system consists of the spatial development policies and strategies called the Structure Plan and Local Plan. Putrajaya Corporation has to produce a written statement and framework for the spatial development policies and strategies called the Putrajaya Structure Plan 2025.

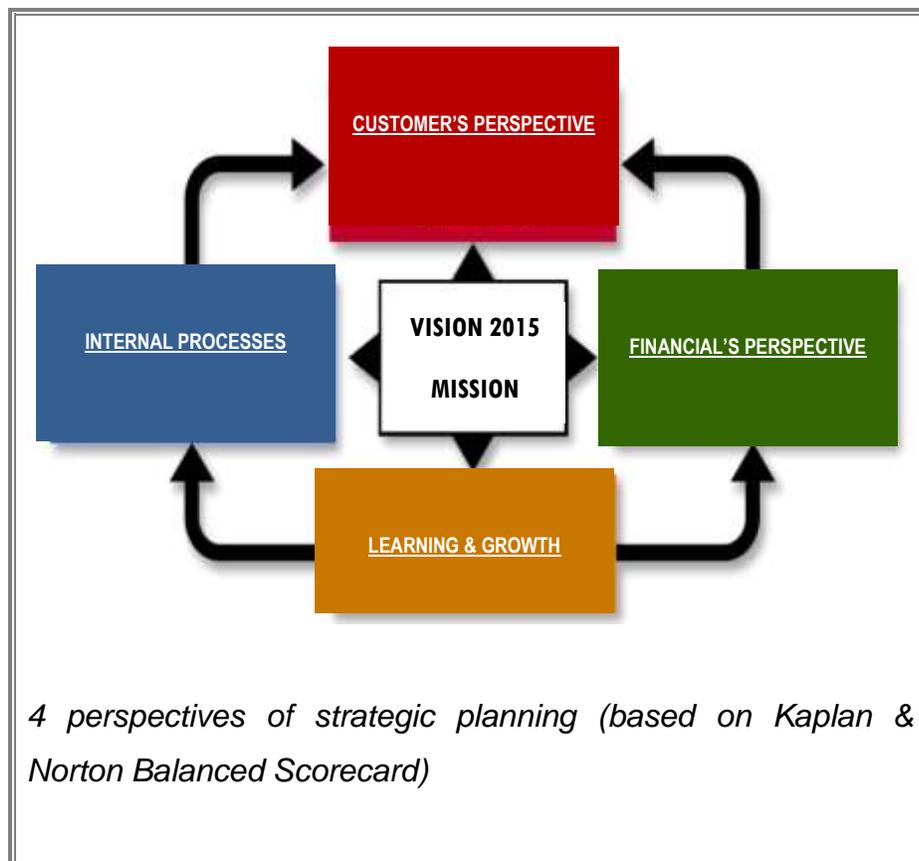
The policies and strategies in the Structure Plan 2025 set the overall spatial context and policy underlying an integrated economic, environmental, transport and social framework for the development of Putrajaya for the next 15 years.

The document also addresses issues such as the provision of housing supported with public amenities and infrastructure, public and private sector cooperation to promote economic development, enhancing tourism industry to complement the economic base of Putrajaya, improving the city transportation linkages and create the essential part of achieving sustainable development. The Structure Plan 2025 also indicates the sustainable use of land, focusing on urban greening and promotes green infrastructure, encouraging a healthy economic development and wealth creation for better quality of life.

Under the provision of the Town and Country Planning Act, the Structure Plan is required to be reviewed once in every five years. The stipulated policies and strategies in the plan must be consistent with the Malaysian development policies and strategies in the 2nd National Physical Plan.

Putrajaya Strategic Plan 2011 - 2015

Putrajaya Corporation as the local authority will try to excel among global cities and to be the role model city for the nation by expanding opportunities for all its residents, enterprises and stakeholders. At the same time striving to achieve the highest environmental standards and quality of life, satisfying its visitors and leading the nation in its approach to tackling the urban challenges of 21st century, in particular the global climate change and promotes sustainable development.



The vision of Putrajaya Strategic Plan 2011 – 2015 was established to ensure that Putrajaya will be a well managed, vibrant and prosperous administrative centre of Malaysia that fulfils the socio-economic, recreational and spiritual needs of its residents, workers and visitors.

The Strategic Plan objectives are to realize the following:-

- (a) Providing adequate affordable homes for its residents
- (b) Efficient and quality services
- (c) Providing quality infrastructure and public amenities
- (d) Safety and healthy environment
- (e) Efficient public transportation
- (f) Economic prosperity
- (g) Engaged and enriched community
- (h) Effective enforcement
- (i) Green practices
- (j) Enhancing good governance and cost effectiveness
- (k) Total Asset Management
- (l) Active tourism marketing and promotion
- (m) Increase stakeholders' engagement
- (n) Diversified revenue
- (o) Technology deployment
- (p) Shared values internalization
- (q) Knowledge based organization

Residents and Stakeholders involvement in Putrajaya Structure Plan 2025 and Putrajaya Strategic Plan Vision

In realizing the plans, Putrajaya Corporation is to ensure that the city makes the most benefits of the energy, dynamism and diversity that characterize the city and its residents, embraces change while promoting Malaysian heritage, neighbourhood identity and values, compassion and citizenship. Both plans should be the guidance for the development of Putrajaya to secure its economic, social, health and environmental sustainability and physical accessibility for its present and future

generations. The plans should form an integral and integrated part to promote safety, security and lifetime neighbourhood.

The management of Putrajaya Corporation has taken brilliant efforts to encourage consensus approach in planning of Putrajaya by engaging public participations and involvement in the planning and development process. The process involved working hand in hand with parties in the private, public and non-governmental organisations and community representatives to embrace ideas and aspirations for city development. The focus is on delivering of common and shared objectives based on a clear recognition of needs of everyone who live, work, study or visit Putrajaya.

To realize the vision as a sustainable green city, Putrajaya will strive in improving the environment locally in contributing to the global agenda on climate change. As Malaysia's pioneer green city, Putrajaya will take the lead in tackling issues on climate change, reducing carbon emissions, pollution control, developing a low carbon economy and consuming lesser resources as well as conserving it for future generation.

CONCLUSION

Putrajaya is a plan-driven city built on a green field site developed based on carefully structured layers of plans and guidelines. Its planning is guided by the city in a garden concept where greeneries and nature are built into the urban fabric. The city provides an environment that is conducive to quality urban living and pursuit of economic activities. Its biodiversity, open spaces, lakes and wetlands, aesthetics and the development of public amenities make it attractive to live in. Putrajaya Corporation as the local authority is taking steps to lead Putrajaya along the green city, low-carbon sustainable development path. Engagement and strong sense of

belonging as well as changing of life style of the community and stakeholders toward green living and practices need to be strengthened.

