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APPENDIX 3B

SPECIAL NATIONAL INTEREST URBAN CENTRES –
PUTRAJAYA AND CYBERJAYA

1. Introduction

The Multimedia Super Corridor (MSC) is a physical area south of Kuala Lumpur, designated as the main development hub of the nation, where the key industry will be information technology (IT), R & D and multimedia, operating within an environment specially designed to facilitate leading edge companies; professional, tertiary and skilled workers; and a growing middle class urban community. It is also a “test-bed” for the new roles of government, collaboration between the public and private sectors, and new paradigms in healthcare, education, entertainment and public services. In consequence, the area has the advantage of adopting standards and practices that are not influenced by other considerations normally associated with infrastructure development within existing conurbations.

Therefore, as part of the SWM strategic study, specific attention is given to the area in order to assess solid waste management planning and operation in an essentially “new community”.

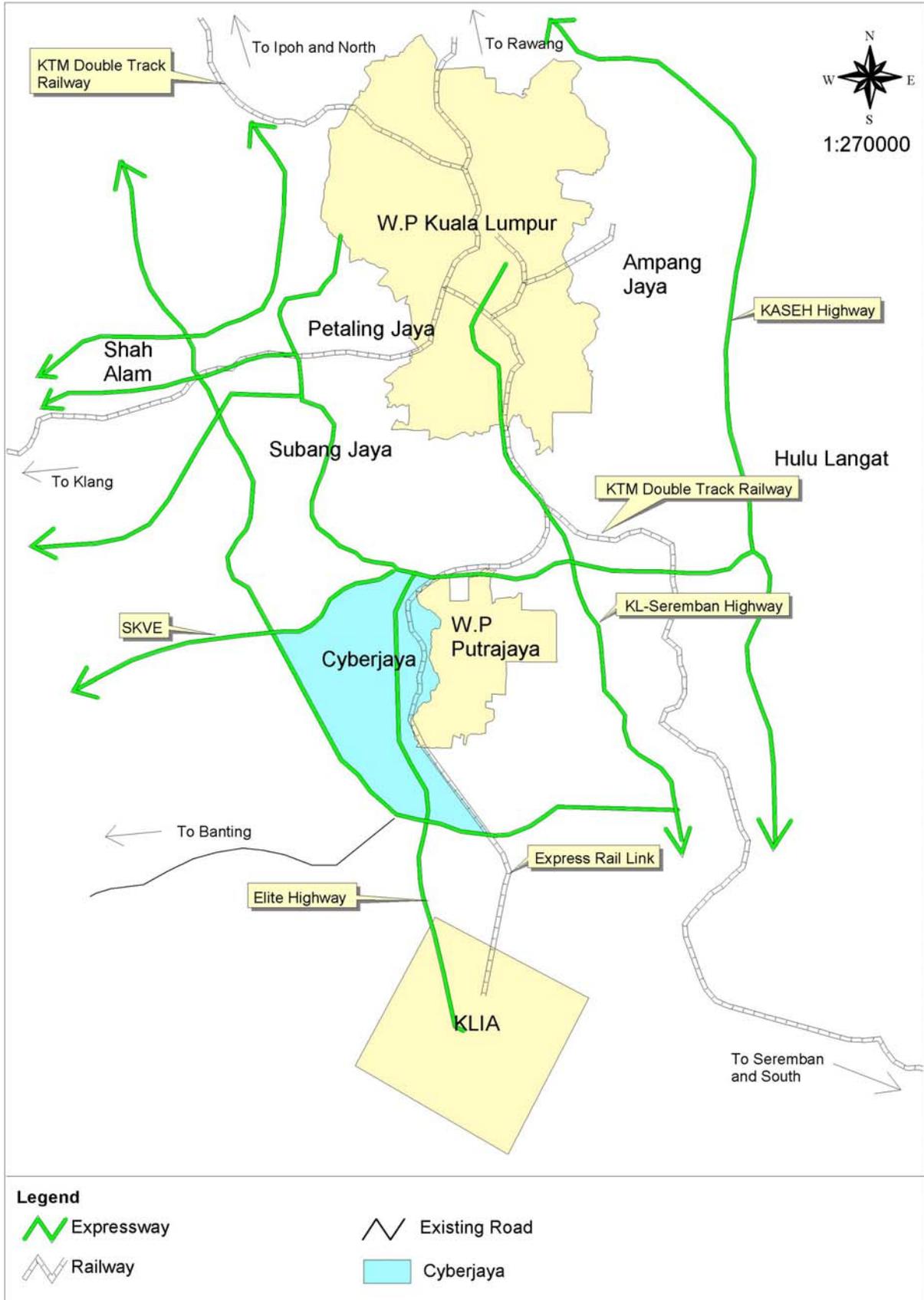
Located within a 575-square kilometer area, the MSC is bounded by the Shah Alam Expressway in the north, the KL-Seremban Highway in the east, the North-south Central Link in the west, the KLIA in the south and straddles part of WP Kuala Lumpur, District of Petaling (MP Subang Jaya) and District of Sepang (MD Sepang) (see **Figure 1**). In the centre of the MSC is Putrajaya, a Federal Territory and new Federal Government administrative centre of Malaysia; and Cyberjaya, the information technology city. The contiguous development of these two mega projects, together with KLIA will provide the “jumpstart” to development within the MSC.

In between these mega projects are ample land areas to be developed for the multimedia and IT industry, as well as housing for the global and local urban community. The peripheral areas are divided into planning areas, each designated for specific objectives and functions.

The District of Sepang has witnessed a sharp swing in population growth in the 1990s, largely due to the development of KLIA and the national priority projects – **Putrajaya and Cyberjaya**. The district’s population grew by 6.47% per annum in the 1990s, compared to 1.56% per annum over the previous decade. In absolute numbers, Sepang’s population increased from 54,700 to 97,900 between 1990 and 2000, according to the 2000 Census. Located in the heart of the southern corridor growth region and forming part of the Puchong overspill, Sepang wherein lies has one of the highest growth rate in the Peninsula. Administratively, Cyberjaya is part of Sepang, but Putrajaya has been afforded Federal Territory status.

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Figure 1: The Multimedia Super Corridor (MSC) and Wilayah Persekutuan Putrajaya



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2. Putrajaya

Putrajaya was formed under the Perbadanan Putrajaya Act. It has more powers than Local Authorities and has power for planning and land issues, and as a Federal Territory it differs from DBKL because it has its own land office. As the new Federal administrative center of the nation, Putrajaya epitomizes the country's vision to build a city capable of meeting the challenges of the new millennium and moving the country rapidly into an era where IT will be an essential part of development. Physically it was planned to embrace two themes, that is, a "City-in-a Garden" and an "Intelligent City". Planned to accommodate at least 335,000 persons on its 4,400-hectare site, Putrajaya is divided into 20 precincts. The core area is designated for government, commercial and civic-cultural facilities whilst the peripheral areas are assigned for housing, parks and open space, community facilities and recreation. The core area is effectively separated from the peripheral housing areas by Putrajaya Lake.

Construction began at the end of 1996 and the first pioneer buildings were occupied in 1998. The target of the 1997 Masterplan was for Putrajaya to be fully realised within 10-15 years. To achieve that target, development phasing for construction work was originally organized under three phases. (See **Table 1** for development phasing of Putrajaya.)

Table 1 : Development Phasing of Putrajaya

PHASE PERIOD	ENDING	RESIDENTIAL POPULATION	GOVT.OFFICE (sq. ft)	COMMERCIAL (sq. ft)
1A	1998	9,760	3.5 million	1.0 million
1B	2000	23,510	7.7 million	1.75 million
2	2006	112,500	10.77 million	6.4 million
3 & Beyond	2020	201,155	Nil	Nil
TOTAL	By 2020	346,925	21.97 million	9.15 million

Sources: 1. Putrajaya Revised Master Plan (1997), pages 8-2 and 8-3.
2. Local Plan for Precincts 1, 7, 8, 9, 10, 11 and 13 (December 2001)

Contrary to the population of 23,500 envisaged in the 1997 Putrajaya Masterplan for Year 2000, Putrajaya had a residential population of only 7,223 persons for that year, according to the latest 2000 Census. Information from Perbadanan Putrajaya indicates that, currently, there are about 5,000 occupied dwelling units in Putrajaya. Assuming a household size of 5 persons per household, it would be appropriate to assume that there are close to 25,000 residents in the new Federal administrative capital presently.

Putrajaya's next target is to build another 22,500 dwelling units by 2006¹ to accommodate the final wave of migration of federal civil servants into the city. Again, using a household size factor of 5 persons, it can be assumed that by 2006, Putrajaya may expect a population of at least 112,500 persons.

¹ Putrajaya Masterplan Review, 1997.

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Staging of the balance of the houses to be built and population to be achieved after 2006 will depend very much on private developer initiatives and markets conditions. However, the design population of about 335,000 persons stands.

In keeping with international trends in solid waste management, the Masterplan for Putrajaya intended that facilities for solid waste management should address reduction, reuse, recycling and recovery. To achieve this waste was to be separated at source into three components, namely recyclables, wet waste and rubbish (comprising any other waste). This system has not yet been implemented but is still planned in the future². However, the Putrajaya Authority has developed a recycling initiative in co-ordination with Alam Flora Sdn Bhd with “buy-back” centres for recyclable materials.

Currently, Alam Flora provides a range of environmental services including solid waste collection, street cleansing, drain cleansing, and litter collection. The present practice includes the provision of high bulk bins for strata-titled residential, commercial and institutional areas, and kerbside door-to-door collection for landed residential areas.

For waste generated in the Government offices, mini-compactors are used to reduce volume for collection. A direct user charge of RM1.02 for each collection (3 collections a week, RM12/month) for householders has been introduced by the authority.

There are no plans for the construction of a sanitary landfill within the city, but the Master Plan for Putrajaya did identify a site for a waste transfer station. Due to the anticipated low volume of waste³ and close proximity to the nearest landfill site in Puchong, Alam Flora did not consider that a transfer station was necessary. Thus, the transfer station site that was previously safeguarded in the Masterplan was subsequently released for other uses.

It is estimated that waste arising will rise from 53,000 tonnes per annum in 2002 to 347,000 tonnes per annum in 2020.⁴

3. Cyberjaya

Spanning over 2,895 hectares within MD Sepang, Cyberjaya will be the leading and key component of the MSC set to become a leading-edge multimedia centre attracting target companies, world class multimedia/IT companies, professionals and students. To support its role and function, state-of-the-art infrastructure, superb living environment, convenient transportation and efficient public services are crucial. Currently, Cyberjaya has a population of only 2,839 persons, according to the 2000 Census, but it is planned to support a living population of 240,000 persons and a working population of 10,000 foreign knowledge workers by 2020⁵.

² Meeting with Putrajaya City Services Dept. 26th March 2002.

³ According to information from Jabatan Perancangan Putrajaya, Alam Flora had undertaken a study on waste generation in Putrajaya.

⁴ Study team estimates.

⁵ Physical Development Plan Study for the MSC, March 1999, prepared by Jabatan Perancang Bandar dan Desa (Semenanjung).

Appendix 3B**4. Future Solid Waste Planning for Putrajaya and Cyberjaya**

The current and anticipated migration of workers from surrounding areas to the two development areas will result in increasing waste generation and a requirement for effective solid waste planning.

In addition, the quantity of institutional waste, particularly the generation of paper based products and high quality card, is expected to be high.

The approval by the Selangor State Government⁶ for the provision of an incinerator and a regional sanitary landfill in the south of the State may, dependent upon final siting considerations, obviate the need for a transfer station in either Putrajaya or Cyberjaya.

However the planning infrastructure and the resident population characteristics (predominantly professional), do lend themselves to the exploitation of solid waste management practices to pursue a "model" which would promote the ethos of waste minimisation and sustainable good practice.

It is recommended that an enterprising approach be adopted in both Putrajaya and Cyberjaya involving:

1. source separation of waste;
2. school education programmes on environmental and solid waste management;
3. community participation in SWM activities (e.g. litter collection, recycling days, local clean up campaigns).
4. Government offices adopting the concept of waste reduction, including policies on purchasing "green" products.

The lessons learnt from such a purposeful, structured initiative could be used for development into other parts of Malaysia.

⁶ Meeting of study team with Selangor State Government representatives July 2002.