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- Authors:** Faudziah Ibrahim, General Manager, KLCC Property Holdings Berhad
Phui Kuan Leong, Executive, KLCC Property Holdings Berhad
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Petronas Towers and KLCC: Urban Catalyst

Faudziah Ibrahim, General Manager & Phui Kuan Leong, Executive, KLCC Property Holdings Berhad

Skyscrapers have a powerful role in revamping the physical landscape of a city, transforming the skyline, and catalyzing urban growth. This is especially true in the case of a well-planned mixed commercial development not driven by speculative short-term investment goals, such as the Petronas Towers. This skyscraper, together with its surrounding complementing developments, has reshaped the city's physical landscape and nearby amenities. Further, it conveys a critical message to the local authorities on the importance of optimizing land use with the construction of high-impact skyscrapers. This development redefines Kuala Lumpur as a global hub, rapidly boosting urban growth and an overwhelming demand for spaces into the city.

The "Old" Kuala Lumpur

Like any other world city, Kuala Lumpur as the city for Malaysia was developed mainly along the convergence of the famous two rivers—the Klang River and the Gombak River. Small shophouses and modest residential bungalows were built along these rivers which served as the main

transportation means to the city dwellers. Most of the commercial transactions were also centralized along these areas. Only after the country's independence won August 31, 1957, more Malaysian have been exposed to the modern and developed world with great influence from the British architecture and education system.

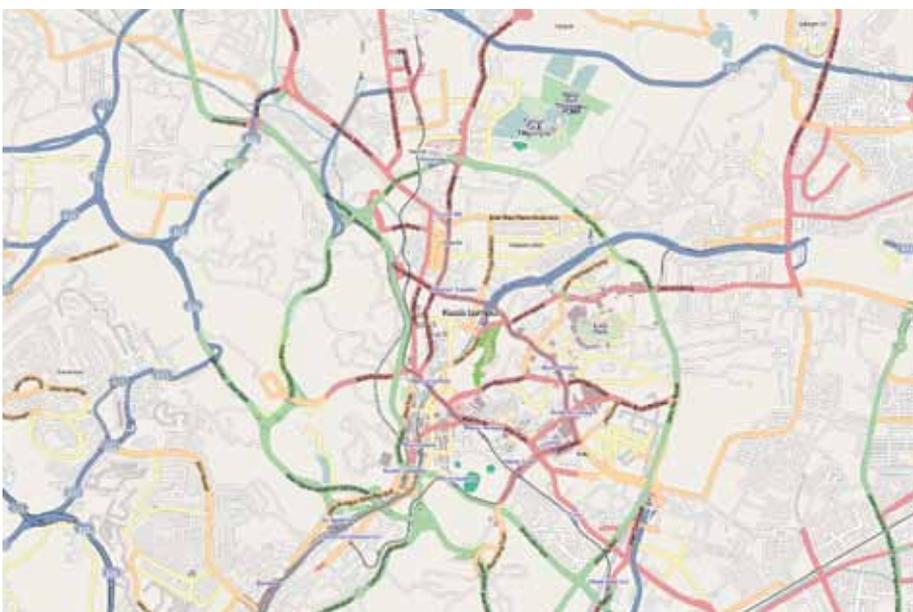
In the early 1970's when the country started exploring industrialization and commercialization of the city space, most of the new buildings also concentrated along these two rivers. Old shophouses were redeveloped into 10–15-story buildings. Commercial, residential, industrial and retail development are all part of the urban development as Kuala Lumpur was the house to a mere one million population. The highest building then was the Bangkok Bank building in Leboh Ampang Kuala Lumpur with the shopping center nestled within a six-story retail podium.

There were no spectacular buildings or high-rise towers that could be associated with Kuala Lumpur or Malaysia's identity or architecture; there were no iconic modern buildings being developed within the city

centre or within the periphery of Kuala Lumpur. Malaysian can only proud of the Parliament Building and then with 35-story Menara Dayabumi (former headquarters of Petronas) which was completed in 1984.

Towards the early 1980's, the newly appointed Prime Minister, Tun Dr. Mahathir Mohamad visualized for a modern and develop nation. The economy activities of the country was geared from agricultural-based towards industrial-based with new technology and innovations were words of the day. The "Look East Policy," in which Malaysians were to be trained and exposed to the developed and high-tech countries like Japan, was introduced when he was six months in office. The famous "Vision 2020" principles (first presented during the Malaysian Trade Council Meeting on Feb. 28, 1991) which prepare Malaysians as individual and society towards a developed nation by 2020.

Since then, Malaysia as a developing country has initiated a number of high-intensity infrastructure and commercial developments in recent years. These include the new international airport with greater capacity, highways connecting the north,



Left: Map of Kuala Lumpur. (cc-by-sa) Dr Blofeld

Opposite: Overall view of the Petronas Towers.
Source: Christineg -Dreamstime.com

south, east, and west, and a new government administrative city, the Putrajaya, and the Sepang Circuit for the Formula 1.

Local authorities in charge of the urban planning and urban infrastructure also changed their planning and development policies by allowing a higher development plot ratio of 2:7. Conversion of land from residential uses to commercial development was allowed especially within the Kuala Lumpur's golden triangle. Old low-rise shophouses were demolished for higher commercial buildings between 30–35 stories. Old residential bungalow lots were amalgamated and redeveloped as 15–25-story high-density apartment towers. Some green spaces were even re-designated as commercial areas to pave the way for modern buildings.

The Famous “Selangor Turf Club”

As the city expanding with new and modern commercial buildings coupled with the implementation of the revised Local Structure Plan for Kuala Lumpur, the creation of a new Central Business District (CBD) is unavoidable. Thus, the former horse race course as Selangor Turf Club with over 100-acres of land located at Jalan Ampang Kuala Lumpur with its huge green space and ancillary buildings was the best choice to be developed as the new CBD for Kuala Lumpur, is replacing the Golden Triangle of Kuala Lumpur. This new CBD is abutting by Jalan Ampang, Jalan P. Ramlee, Jalan Binjai, Jalan Kia Peng and Jalan Pinang.

With its strategic location and right in the middle of the city centre, Selangor Turf Club was also the cause of the notorious traffic jam along Jalan Ampang especially during any race day. There have been frequent public opinions that requested the government to move the horse racing activities to the suburban areas which can offer better racing facilities. In early 1980's the government decided to “swap” the Selangor Turf Club with another huge green lung outside the city



centre. This new Selangor Turf Club is located at Sungei Besi which is approximately 17 kilometers from Kuala Lumpur.

In mid-1980's the local authorities led by Kuala Lumpur City Hall initiated an international master plan competition for the redevelopment of Selangor Turf Club. It was envisaged that the 100-acre development will be the new “heart” and commercial centre of Kuala Lumpur that will also showcase the Malaysia's development success story by 2020. The eventual winning entry was work by California based architectural firm, Klages Carter Vall & Partners. The master plan concept was based on 60% green and utilities and 40% development lots. The 60-acres public park was the last work of the late Roberto Burle Mark of Brazil.

When Petronas, a Fortune-100 state-owned oil and gas company, which was then headquartered at Menara Dayabumi with other offices scattered at various other buildings in the city centre, decided to house all operations under one roof; Tun Mahathir Mohamad suggested that the development land at the Selangor Turf Club is the best location for the new HQ of Petronas. The redevelopment of the old Selangor Turf Club is now known as Kuala Lumpur City Centre or abbreviated as “KLCC.”

KLCC was envisaged to be the new CBD of Kuala Lumpur – a conceptual thinking by Tun Dr. Mahathir Mohamad in transforming the “unproductive” monthly race course area into a visionary “City within the City” concept where it is the



host to an integrated and self-contained modern city.

The whole master plan was further reviewed by architect Cesar Pelli, who was appointed as the winning concept architect for the Petronas Twin Towers. Completed in 1996, the Petronas Twin Towers complex was the tallest building in the world from Jan. 1, 1998 until Dec. 31, 2004. Currently, it still holds the record for the tallest twin buildings in the world.

KLCC Initial Master Plan

Petronas, an oil and gas company and now one of the Fortune 100 company holds 100% ownership of KLCC (Holdings) Sdn Bhd (KLCCCH), the master developer of KLCC. As the property arm for Petronas, KLCCCH is entrusted

to develop the rest of KLCC lands into iconic, modern, functional and trend-setter developments whilst at the same time respect the magnificent Petronas Twin Towers.

The initial development concept of KLCC was focused on firstly long-term property investment – as the new central business district for the city, all commercial, residential and retail development at KLCC Precinct are for long-term investment in which the lot owners will retain the investment for long term appreciation and revenue, not for disposal or sale to third party; secondly non-speculative investment - any development lot develop must have confirmed tenants (medium to long-term leases) or confirmed operator as the development will only be approved

based on non-speculative development; thirdly commercial development – the development should be for premium Grade-A offices, luxury residential for sale, premium retail and 5-star to 6-star hotel; and lastly the whole development lots are target to be completed within 14 years after the completion of the Petronas Twin Towers. Indirectly the master developer envisaged that the Petronas Twin Towers which was designed as an intelligent office building that command premium rental will set as the catalyst for future office buildings particularly in Kuala Lumpur.

After a long negotiation on the development master plan and land-use treatment for future connectivity and public transportation within the city centre, the local authorities decided that KLCC development need to be given top priority as the commercial hub for Kuala Lumpur. New planning approach for example no building set-back fronting the KLCC Park, basement parking wall up to the land boundary lines and no provision of podium parking are specially formulated in ensuring all commercial development at KLCC will materialized in meeting the modernization wishes of the government.

The initial KLCC development master plan was approved by the City Hall Kuala Lumpur in 1995 with an overall gross floor area of 18.3 million square feet and spread over 22 commercial development lots. The required infrastructure and utilities such as the water supply system, power supply, district cooling centre for the air-conditioning of the buildings, waste management, underground

Opposite Top: Old Race Course. Source: KLCC Property Holdings Berhad

Opposite Bottom: 1995 Masterplan of KLCC including the Petronas Twin Towers. Source: KLCC Property Holdings Berhad

Bottom: Detailed façade view of the Petronas Towers. Source: Tansri Muliani

“By the year 2010, most of the vacant development lots surrounding KLCC had been transformed into high-rise, high-density and high-plot-ratio lands which allows the owner to build up to 50-story buildings. The landscape of the Kuala Lumpur city centre had changed towards sky-scrapers with most of the residential lots being converted to commercial land use.”

car and truck tunnel, the public park and the mosque are provided in advance of the commercial development. The 22-lot owners are supposed to share these cost under infrastructure cost sharing basis. For the maintenance and management of the underground car parking facilities and the public park, the owners parties to the common estate agreement and common facilities agreement.

The KLCC development master plan also allows the master developer to “transfer the development rights” of the utilized GFA to other undeveloped lots. This means that the height of the commercial buildings within KLCC Precinct can vary according to the allocated gross floor area.

Phase 1 development comprises the ExxonMobil Tower (1996), MAXIS Tower (1997), Petronas Twin Tower (1997), Mandarin Oriental Kuala Lumpur (1998), the public park (1996) and the district cooling centre (1996).

With the completion of Petronas Twin Towers and subsequently buildings, the Kuala Lumpur’s skyline has changed and for the next three years, more planning approval for commercial buildings between 30 to 40 story were approved by the local authorities.

The Convention Centre component which was not part of the KLCC initial master plan was incorporated in the master plan as Malaysia is lacking in the international-standard convention and exhibition facility and unable to host major international events. The convention centre is also aimed





to increase pedestrian traffic and vibrancy to the whole of KLCC development. The spin-off effects of the convention centre activities to KLCC, Kuala Lumpur and Malaysia were too great to be ignored.

Completed and opened to business in 2005, the Kuala Lumpur Convention Centre which spans over seven acres of commercial lands, is one of the premier convention centre in Asia which offers the best facility for meetings, incentives, conventions and exhibition. With the completion of Impiana KLCC Hotel (2005) and Traders Hotel Kuala Lumpur (2006), the KLCC development has become the development catalyst for an urban space with its “City within a City” concept – a place for people to work, shop, visit, eat and live.

By the year 2010, most of the vacant development lots surrounding KLCC have been transformed into high-rise, high-density and high-plot-ratio lands which allows the owner to build up to 50-story buildings. The landscape of the Kuala Lumpur city centre has changed towards sky-scrapers with most of the residential lots being converted to commercial land use.

The completion of 59-story Tower 3 Petronas in 2011, offering Grade-A office space with bigger floor plates and a retail podium that is fully integrated with the shopping mall, Suria KLCC triggered a new craze among commercial developers in Kuala Lumpur for premier Grade-A office with mixed retail component. By this time, most of the new development lots were approved to be taller than 50-stories and mostly with the mixed commercial development concept rather than a single-component development.

Revised Development Strategy

As land become more scarce with demand for premium commercial spaces increasing, the development has to be denser implementing vertical stacking rather than horizontal stacking. The building becomes taller due to the higher development-plot-ratio and the multiple components designed. Surrounding lands at KLCC are being developed into high-rise residential and office buildings.

In response to these change of development approval by the local authorities, in 2010 the master developer of KLCC has engaged RNL Design (Klages Carter Vail & Partners

was annexed by Denver-based RNL Design in 200 in a successful corporate merger) to revisit the initial KLCC Master plan approved in 1995. New development elements were introduced and new opportunity to “unlock” utility lands and incorporation of newly acquired development lands were included in the revised master plan. Subsequent to these changes, in 2012 the master developer obtained the local authorities’ approval to revise the 1995 KLCC Master Plan, augmenting the overall gross floor area from 18.3 million square feet to 25.7 million square feet, three new lots are included as part of the revised master plan and the “transfer of development rights” to undeveloped lots are still recognized by the local authorities. This revised KLCC master plan indirectly allows KLCC to have taller buildings and possibility of redevelopment of some completed buildings in the future.

With another 13 more undeveloped lots, the average buildings to be developed within KLCC Precinct will be more than 70-story high.

The development strategy for KLCC has been revised with the vision to position Kuala Lumpur City Centre as a premier

Opposite: KLCC Park, 2015. Source: KLCC Property Holdings Berhad
 Right: Revised KLCC Master Plan 2012. Source: KLCC Property Holdings Berhad
 Bottom: Revised KLCC Development Concept. Source: KLCC Property Holdings Berhad

development in the world; with a mission to develop a world-class integrated development with “a City within a City” where people can work, live, shop, play, meet, visit and eat. A new development component that further increase the area vibrancy has been introduced – the arts and cultural hub.

It has been envisaged that the arts and cultural component – a new contemporary arts gallery for Petronas, an 1800-seat performing arts theatre, an interactive discovery centre and exclusive observation deck – will create a new development benchmark in Kuala Lumpur.

The new commercial development at KLCC need to be iconic in terms of design, efficient and functional in terms of space performance and the trend setter to other development in Malaysia.

The vibrancy nodes – on, above and below grade connectivity for pedestrian and vehicles will be improved and added as a new development elements to the individual development lot. Public amenities such as car parking, mosque, public park and public transportation system will also form part of the overall revised master plan.

On the environmental green initiative and low carbon footprint, all new development at KLCC will be designed with certification by LEED ND, Green Building Index (Malaysia), MSC and Cybercity Status for technology-based tenants.

Currently, three high-rise buildings (all of which are above 50 stories) with mixed commercial functions are being developed in KLCC. The completion of these buildings in 2019-2020 will further solidify Kuala Lumpur’s position as one of the world’s skyscraper cities.

The New Skyline

The completion of the Petronas Twin Towers not only transform Kuala Lumpur’s skyline

REVISED KLCC MASTERPLAN 2012



REVISED DEVELOPMENT CONCEPT

- Opportunity to unlock the utility and acquired lands to mixed commercial development
- DBKL revision of overall plot ratio i.e., 3.9 to 10
- Enhance commercial vibrancy

An integrated mixed commercial development with long-term non-speculative investment strategy.
 A CITY WITHIN A CITY where people...





Left: Rendering of one of the many projects scheduled to complete in the KLCC Park. Source: KLCC Property Holdings Berhad

but also the heart of Malaysia. It is hard to overstate the importance of the role the Petronas Twin Towers has played in Kuala Lumpur's continuing evolution into a world-class city. Often cited as the landmark that placed Malaysia on the map of globally recognizable cities, this architectural marvel is a sight to behold. The Petronas Twin Towers are a monument that symbolizes the vision and the growth of a nation. The Twin Towers were the accent that highlighted Malaysia's advancement towards a developed nation in five years, in the year 2020.

An astonishing 20 years since construction began on the old Selangor Turf Club, KLCC is now the most prestigious corporate address within Greater Kuala Lumpur, and is where the pulse of the city beats strongest. KLCC is known as the CBD of Kuala Lumpur, features integrated mixed-development with high-end residential, five-star hotels, convention center, meeting and exhibition facilities, and a luxury retail shopping center. The development comprises buildings designed by world-renowned architects with Grade-A office space housing professionals from the oil and gas industry and Fortune 500 companies.

The Petronas Twin Towers, Tower 3 Petronas and other office buildings within the KLCC Precinct have indeed set a new benchmark for modern office buildings in Kuala Lumpur. The revised land use and development strategies planned by the local authorities have taken into consideration the real impact of this world class property development initiated by KLCCH. Surrounding development lots within KLCC vicinity were approved with higher plot ratio.

To support this change of skyline, the Kuala Lumpur Structure Plan (KLSP) 2020 has been reviewed accordingly. Section 125 of the KLSP 2020 states: "The development strategies for the next 20 years are focused on the vision for Kuala Lumpur to become a World-Class City. The strategies are also firmly grounded on the direction and accomplishments of the KLSP 1984 that set the framework for the structure and present growth patterns of Kuala Lumpur. The physical shape of Kuala Lumpur, the distribution of land uses, the new growth areas, and infrastructure development especially roads and rail systems are all directly attributable to the policies and strategies set out in the KLSP 1984."

Section 126 states: "The population base of Kuala Lumpur is set to increase from 1.4 million to 2.2 million over the next 20 years. Within the context of a city that is already well-developed, new strategies that optimize limited land resources need to be devised. This Plan is part of the ongoing evolution of the City and the development strategies set out here form the basis for the planned spatial development of Kuala Lumpur, as well as guiding the formation of sectorial policies up to the year 2020."

Section 127 states: "The strategies are all encompassing and cover every aspect of the City fabric from spatial and infrastructural development to urban design and less tangible qualities of the City experience that shape and mold people's perception of the City and their place within it."

The Urban Catalyst

The transformation of the KLCC precinct by the Petronas Twin Towers into a prestigious address in one of the most prominent global hubs in the world has resulted in a high demand for commercial spaces in this location. The strong demand against the backdrop of limited availability of space and vacant land, has stimulated the growth of skyscrapers in this vicinity, as evidenced by the emergence of more than ten blocks of high-rise skyscrapers in the past decade. With the growth of demand continuously outpacing the supply, compounded annual growth rate of the rental rates and capital value of commercial spaces have risen by more than 10% in the last decade. Regardless, demand is unhampered by the increase in commercial value against the backdrop of limited supply of vacant land and spaces in the city, and continues to underpin the construction of new skyscrapers in KLCC precinct. There are 16 high-end giant skyscrapers slated for completion between 2015 and 2019. These skyscrapers have more than 50 floors on average. Examples include the KL118 Tower with a height of 610 m (118 floors), Four

“The Petronas Twin Towers have not only transformed the skyline of Kuala Lumpur City Centre, but have also induced growth of other skyscrapers in close proximity, which echoes the aforementioned change in land use strategies.”

Season Place with a height of 342.5 m (65 floors), the Fairmont Kuala Lumpur Tower 1 with a height of 370 m (78 floors), Fairmont Kuala Lumpur Tower 2 with a height of 278 m (71 floors), Naza Tower 1 with a height of 272.6 m (50 floors) and Menara Bangkok Bank@Berjaya (46 floors).

The emergence of these skyscrapers has reshaped the once-cluttered city center into the most sought after premier address in Southeast Asia for multinational companies, prominent hotels, and high-end retail outlets to operate their businesses and services. In order to cater to the sophisticated needs of their tenants, the project has spurred economic development initiatives that were championed under the National Key

Economic Areas by the developers of the Petronas Twin Towers.

Corporate Social Responsibility

Apart from generating commercial benefits, the developer of the Petronas Twin Towers, KLCCCH, also champions the delivery of Corporate Social Responsibilities by partaking in the upgrading of surrounding public amenities. Examples include the upgrading of the pedestrian walkway to create seamless interconnectivity with other surrounding developments. Through this gesture, the developers of the Petronas Twin Towers aspire to exemplify the CSR roles of a responsible developer, and to inspire other developers in the KLCC precinct to also deliver their CSR responsibilities

Final Thoughts

The emergence of the Petronas Twin Towers is a significant milestone towards materializing a growth-oriented, iconic, and forward-looking landscape for Kuala Lumpur City Centre. Gratitude must be expressed to all parties who had contributed significantly to convene the creation of this masterpiece with substantial impact on the Kuala Lumpur City Centre and the nation. It is a significant achievement in the journey toward realizing Vision 2020.

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