

Abandoned Development as a Brownfield Site: Case Study Kemayan City, Johor Bahru

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Abstract

Sustainable development is ensures the developed countries in maintaining the stability of different angles. Sustainable urban development is taking into the capacity, optimize resources, and control pollution in the city and surrounding areas. Urban planners should actively participate in land use planning. Therefore, there is a Brownfield redevelopment, which supports sustainable site planning and management through innovation for the occupation of the building or land existing in an innovative way. The purpose of this paper is to identify the areas that are classified as Brownfield while linking it to sustainable element. Research focused on Johor Bahru City because of the tendency to abandoned buildings. Survey and monitoring methods used to identify areas that meet the Brownfield characteristics described in the literature. Analysis is performed in the form of descriptive and summarized in tabular form with description. Lack of exposure to the implementation of the redevelopment is due to the parties that are less sensitive to the issue of land shortage. Research is useful to stakeholders, particularly local authorities in implementing sustainable Brownfield redevelopment to protect development, especially in urban areas.

Keyword

Brownfield, Abandoned Development, Urban Area

1.0 Brownfield

In the United States, the U.S. Environmental Protection Agency (U.S. EPA) has issued a definition of a Brownfield in 1997. It is known as an area of abandoned, idle, or types of industrial and commercial development of neglected and considered complex to develop because of the environmental pollution caused by the real. However, in 2002, the U.S. EPA's revised definition classified as property, the expansion, redevelopment, or reuse may be complicated by the presence of contaminants that could potentially be harmful substance causing pollution (Ling, 2008). While

in Malaysia, Brownfield is defined as the area developed but abandoned, neglected or have obsolete development structure and development not fully completed and abandoned (Chun-Yang, & Talib, 2006). It also has been classified by the Town & Country Planning Department of Peninsular Malaysia in the Guidance Identification for Brownfield Redevelopment (draft) shown in Table 2:

Table 1: Categorize of Brownfield in Guidance Identification for Brownfield Redevelopment

Picture	Types	Category	Selection
	Former mining and quarrying	A	X
	The former landfill site that has full/ no longer in use on a permanent basis	B	X
	Areas of the plant/ business/ housing/ institutions that have left more than 10 years	C	X
	Abandoned development projects that are not completed within the implementation of more than 10 years	D	√
	Building/ row building lots that have been completed but abandoned more than 10 years	E	X
	The former depot/ public transport station, infrastructure and utilities	F	X

Brownfield features for categories D and E issued by the Town & Country Planning Department of Peninsular Malaysia (TCPD), abandoned buildings and abandoned before operating for over 10 years and has completed but abandoned after some time in operation. Most of these features are available in several buildings in the city of Johor Bahru has been abandoned. Therefore, it has been selected to ensure the building to serve as examples of cases that meet the characteristics listed for Brownfield.

2.0 Development in Johor Bahru City

Johor Bahru is the second largest city in Malaysia, with a population over 1 million people. This city has turned highly linear pattern of development and progress towards the north that can be seen along the north of the city center towards the Johor Bahru Skudai and Senai. It is the capital city of the largest contributors of RM2 million in the metropolitan area in Malaysia after Kuala Lumpur and the Klang Valley. Johor state changed into a developed country with 59 projects covering six fields of three high growth areas and three areas related to improve the quality of life. The Prime Minister has insisted that all projects under the Transformation Programme and City Corridor of Iskandar Malaysia has a total investment of RM139.3 billion, which was launched in stages. All the projects are implemented in phases and are expected to generate a Gross National Income (GNI) of RM25.57 billion while offering 68,000 jobs by 2020.

Before Iskandar Malaysia was launched, Johor economy relies heavily on manufacturing industry is not all high value-added. However, the launch of the Iskandar Malaysia has formed a complete ecosystem in the industry to be promoted. Financed initiative has resulted in foreign investment rose to RM37.09 billion in 2012 from RM22.83 billion in 2008. The increase in domestic investment rate has occurred at a higher rate. The proof is shown by the year 2008; only 45% local investment in Iskandar Malaysia has increased to 63% cumulatively (Malaysian Investment Development Authority, 2012). Iskandar Malaysia is expected to reach RM100 billion investment target after posting a cumulative investment total RM99.79 billion in the third quarter of this year. Reference sources from Johor Economic Planning Unit (UPENJ) stated that the economic corridor has attracted a total of RM15 billion in cumulative investments (Bernama, 2012). Accumulated a total of RM99.79 billion investment recorded by Iskandar Malaysia is through manufacturing sector of RM33.36 billion from RM32.94 billion in real estate sector, RM7.31 billion from government grants, RM9.52 billion involving utilities, RM2.03 billion in the tourism sector and other amounted to RM14.63 billion (Bernama, 2012). In February 2008, the price of property in Flagship A in Iskandar Malaysia is in the range from RM30 to RM150 per sq. ft. (U.S. \$ 9 - U.S. \$ 45) for residential and RM70 to RM150 (U.S. \$ 20 - U.S. \$ 45) per square meter for commercial (IRDA, 2012). So, if the abandoned buildings not to be redevelop, it will affect the price of property and investment in Johor. The main economic activities in Flagship A is affecting the financial services, retail trade, arts and culture facilities, hospitals, city tours, plastic manufacturing, electrical and electronics, and food processing.

Business complex in Johor Bahru introduced since the late 70s. The first business complex is the Tun Abdul Razak Complex (Komtar). It was built in the city center in 1978 and has an area of 19,322 square meters. More complex built wider than the Komtar Sentosa Complex (Kompleks Lien Hoe) located at Jalan Sutera, Taman Sentosa. Development of shopping complexes in Johor Bahru continued to expand with the establishment of a new commercial building (Nor Hidayah, 2008). Table 1 below shows commercial buildings in Johor Bahru City built a lot of new and old buildings have been restored and operated until now.

Table 2: List of commercial buildings in Johor Bahru City

Name of the Commercial Buildings	
Aeon (Tebrau City, Bukit Indah, Permas Jaya, Taman Universiti)	Today's Hypermarket
City Square JB	Holiday Plaza
Galeria Kotaraya	Giant Hypermarket
Plaza Tasek	Carrefour
Plaza Pelangi	The Zone Duty Free Shopping Centre
Plaza Angsana	Tesco (Plentong, Bukit Indah, Tebrau)
Perling Mall	Kompleks Pusat Bandar, Pasir Gudang
Skudai Parade	KSL City Hotel & Resort
Sutera Mall	Danga City Mall
Kipmart Hypermarket	@mart Hypermarket

Numbers of shopping complexes in Johor Bahru City area are growing due to the area that became the main focus of the public. However, there is still a development project consisting of commercial buildings that are abandoned. Johor Bahru City area which is the focus of development projects have been noticed by the authorities to address the problem of abandoned buildings for some of the period (Casler, J., Chen, Y., *et al.*, 2010). Abandoned development projects intended are either operating or have not been completed since the implementation of development. So, this research shows the abandoned project is one of the Brownfield areas (Town & Country Planning Department, 2011).

3.0 Selection of Study Area

Despite the rapid pace of infrastructure development including construction of towers and high-rise buildings, defects arise when there are many views of abandoned commercial buildings. Besides polluting the scene, most of the buildings are almost completed but left empty for years are also invited a variety of social and health problems such as local residents. There were 13 commercial building project in the city of Johor Bahru reported abandoned. However, there is a significant of three main buildings visible because of the strategic location in the city center Kemayan City in Jalan Skudai, Pacific Mall in Jalan Storey and JB Waterfront City on the Lido waterfront as a magnet for tourism and shopping Shopping in Johor. A survey was conducted in the vicinity of the construction area Kemayan City and found that the building was severely damaged by vandalism and the environment fully of bushes.

The building was supposedly built in 9-storey commercial space, 3 blocks and 1 block hotel office. However, it was abandoned with the condition of the building is not completed since 1998 (Johor Bahru City Council, 2012). Shrubbery conditions can cause health and social problems. It can also reduce the economic generating activities for the area. This is an obstacle to sustain the city (Yoon, L. K. (2010). Therefore, Kemayan City was chosen for this research as to achieve the characteristics of potential Brownfield upgraded and expanded.

4.0 Kemayan City, Johor Bahru

Kemayan City is a landmark for visitors who come from the North, skirting out of the North-South highway towards Jalan Skudai Johor Bahru City Center. Kemayan City is one of 19 abandoned buildings including being restored and is located in the administrative area of Johor Bahru City Council. Based on the original plans in 1993, Kemayan City shopping center will be the largest single integrated in Johor Bahru. The commercial development project has an area of 64,800 square meters and is located on a site of 4.8 hectares in area Tampoi which is about 12 km from Johor Bahru city center. This area can be compared with the construction of single storey terrace house with an area of 1400 square feet and be constructed of 498 houses. The original estimate of the project is worth RM400 million. Kemayan City development was abandoned in 1998 due to the economic crisis (MBJB, 2011). However, these owners still have to pay their loans to the finance company. There are also the owner who bought the building lot amount RM1 million. In 2010, Kemayan City was acquired by the Blackstone Group Eight Sdn Bhd, a subsidiary company of Allstonesgroup.



Figure 1: Illustration of Kemayan City, Johor Bahru

To ensure this abandoned building and restored to be developed in parallel with the development of Iskandar Malaysia, various parties including Johor Bahru City Council help to solve this problem (Utusan Malaysia, 2010). According to the ex-Minister of Johor, Kemayan City will be restored under the management of new developers. For Kemayan City redevelopment plan, it will be renovated and redeveloped into a contemporary shopping center and hotel, to be known as the B8 Mall shopping center from mid-2011. It is expected to have been completed by the end of 2013. However, there are some problems that unable to be avoided, especially in terms of the economy has resulted in the development of Kemayan City cannot be performed (MBJB, 2011).

Strategic development location refers to the selection of areas for major new residential and non-residential development (employment, leisure and retail), including the spatial distribution of housing and employment within Growth Areas and Growth Points and between urban centres. Kemayan City is located at Batu 7, Jalan Skudai side Luxury Park, Tampoi. About RM400 million with 64,800 square meters of retail space located on the site of 4.8 hectares and approximately 12 km from the city center. It is a strategic location and easy access to this area, from the North via the exit of the North-South highway towards Jalan Skudai Johor Bahru City Center. Kemayan City is located at the side of the road and viewed along the road. There is strong linkage with development site location, which takes place lower down the strategic scale, where integrating development into the existing urban fabric is considered.

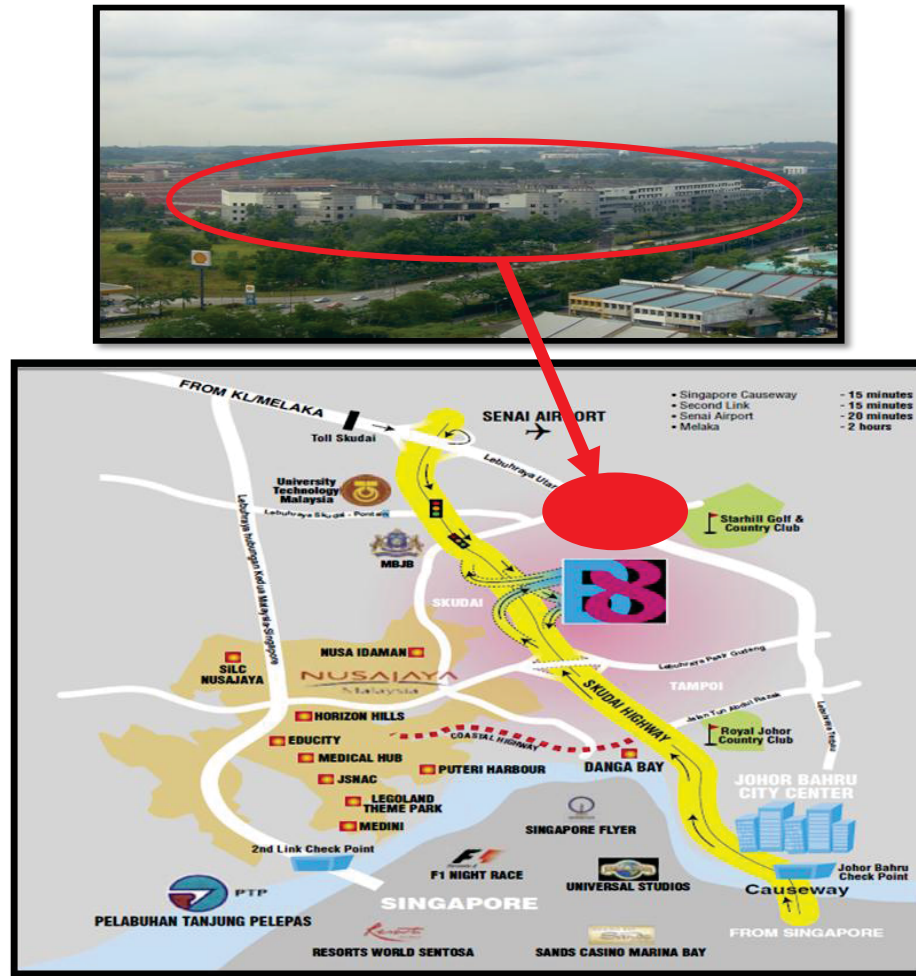


Figure 2: Location of the study area

5.0 Current Conditions of Kemayan City

Kemayan City situation has a negative impact on the image of Johor (Johor Bahru City Council, 2012). Clear picture of this building is too old and contaminated in the surrounding area. In addition, the survey found the physical structure of the building; plumbing and electrical systems are no longer manageable, bushes which grow wild around the building, exposed to stagnant water and mosquito breeding and the interior of the building into place activities that are not healthy. An overview is as follows:



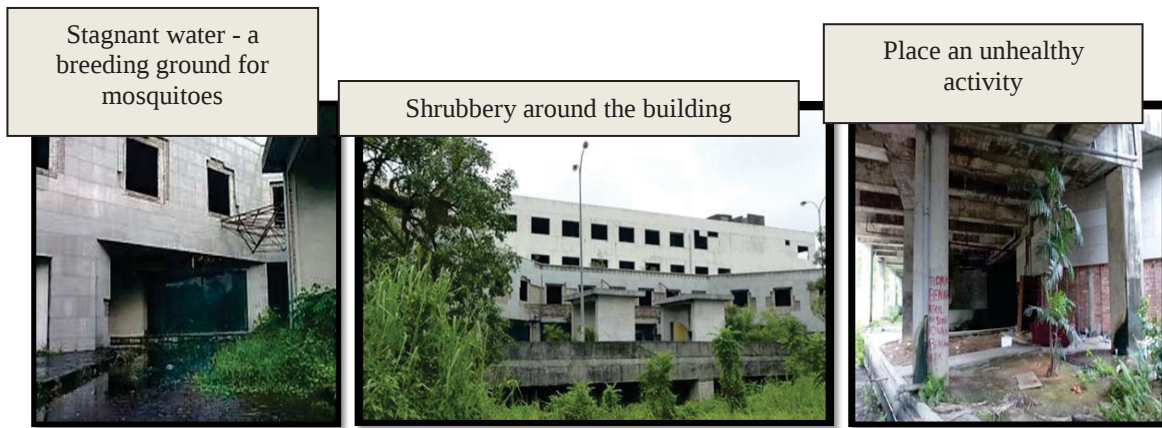


Figure 3: The situation around Kemayan City

6.0 Brownfield Redevelopment Initiatives - Kemayan City

The shopping center has been completed 90% sold. In Asian financial 1998 crisis, liquidator has been appointed to distressed assets. It confirmed abandoned in 1998 because of no construction work done for six months (Bakar, A. H. a., Raml, M., *et al.*, 2010). In 2010, Blackstone Eight Sdn Bhd (B8), a subsidiary wholly owned by Allstones Asian Group entered into a Sale and Purchase Agreement to purchase this development project. This company will refurbish the building to suit the current market trends and expected to open in 2013. In addition, the second phase of a project to build a 4-star hotel will begin after completion of the first phase of the shopping center. Redevelopment of Kemayan City only involves internal compartments through the planning permission process. Changes to increase lots of parking and the height of the construction of the hotel will also be made due to changes in the types of development. Figure 5 shows a sketch of the proposed development to replace Kemayan City called B8 Mall. The building will form a shopping and hotel complex with over 2 phases of development. But, it is still in the idle condition in present time even though it was acquired.

6.1 Infrastructure and Public Facilities

Infrastructure construction is expected to involve high costs for facilities such as water tanks, electrical substation, and the existing sewerage system that needs to be replaced again due to long left of the building. It has a strategic location at Jalan Skudai because it is providing variety of public facilities such as schools, mosques and bus services. Construction of electrical substation will only be provided by the developer in the building. Moreover, the road has been built overhead and still located in the same location which forms a U-turn to head towards Skudai and Tampoi area as shown in Figure 4. This makes it easy to the road users, which does not require the public to make a further round to Skudai.



Figure 4: Overhead to make a U-turn towards Skudai

7.0 Discussion

The issue discussed was the development in Johor Bahru City. Johor Bahru City is an example due to its urban location factors potentially advanced and competitive with neighboring countries, Singapore. It gives the impression that sustainable development in Johor Bahru City is at the critical stage. Brownfield issues highlighted for its

relationship with abandoned development is one of the categories in Brownfield by Town & Country Planning Department. In addition, Kemayan City, Johor Bahru has been discussed a Brownfield characteristics of commercial buildings that have been abandoned for more than 10 years. In addition, other factors such as the condition of the bushes and turned into reservoirs and unhealthy activities that will cause the effects of social and environmental. Furthermore, Brownfield site gives impact on economic whether in the same or near to the Brownfield site. Land values will be disrupted due to the existing Brownfield site. This also gives the image of a defect developing cities like Johor Bahru City and unable to achieve a sustainable of a city. Development of Johor Bahru City recorded a high rate of investment per year. The higher the amount of urban development there is, the greater the rate of economic investment in areas such as Johor Iskandar Malaysia. Most of the abandoned project has affected the economic, social and environmental. Therefore, effective policy is needed to ensure the well-being of a city community. In conclusion, the brownfield redevelopment should be taking a serious step in order to achieve a sustainable city; economic improvement, reduce a social problems and gives a clean environment to get a quality of life.

Conclusion

This paper tries to describe the Brownfield characteristic of commercial building in Johor Bahru City. The case study showed that the building is considered as a Brownfield site. The building is full of bushes and can cause unhealthy environment. Besides, the Brownfield site can reduce the land values which affect the Johor economic. Some proposals need to be emphasized in these Brownfield problems. Among the proposals is to create a specific method to redevelop Brownfield area. This can help to sustain especially in the urban area. Second, the local authorities are responsible to look into this matter. It is because the area is monitored by them and they have the power to manage the area. Respondents from Johor Bahru City Council also suggested the necessity to give an exposure to the developer regarding this matter. The definition of Brownfield should be exposed to the public so that it can be built together among the stakeholders. In addition, all parties must work together in order to achieve a sustainable city.

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Biography

Nurlaila Ali is a postgraduate student in Universiti Teknologi Malaysia, Johor Bahru, Malaysia. She earned B.Sc. in Land Administration and Development. Currently, she is doing her Masters in Land Administration and Development (research mode). She has published conference papers. Nurlaila has done research projects with Universiti Teknologi Malaysia titled 'Assessing the Green Building Index for Brownfield Redevelopment in Malaysia'. Her research interests include planning development and land management.

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Kamalludin Bilal is a graduate of Diploma Agriculture (UPM), Bachelor in Landscape Architecture (UTM) and Master Sc. Facilities Management (UTM). He also a Corporate Members Institute of Landscape Architects Malaysia and has Certified Arborist of International Society of Arboriculture (ISA). He has an experienced over 20 years in public and private practice in Landscape Design and Construction. Kamalludin can accomplish large or small projects while maintaining quality and focusing on every detail. He is currently doing his PhD in Facilities Management and his publications also in this research area.