

Conceptual Master Plan for Bandar Seri Begawan Central Business District Waterfront Precinct

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(All Fifth Year Architecture Students Semester 2 2013/2014 (UPM)
and All Fourth Year Geography Students (UBD))



Introduction

The decline of traditional central city areas, with major activities moving out to the newly established activity centres, is an on-going phenomenon in post-industrial urban development in North America, Australia and Europe (Hall 1996, Cullingworth 1997, Pacione 2005). Many traditional central city areas witness a decrease in the amount of commercial/retail space, loss of residential population, decline in economic activities, and the rise of unemployment, social polarization and visible economic blight.

Bandar Seri Begawan, the capital of Brunei, developed as a network of water villages, was known as the Venice of the east back in the 16th century. During the British administration in the early 20th century urban development commenced on the dry land opposite the main water village (Kampung Ayer) (Ibrahim 2013). In the 1970 Pusat Bandar (the Central Business District of Bandar Seri Begawan) seated major national institutions, commercial offices, and retail establishments. However, with the expansion of the city many government institutions and commercial establishments moved to the new suburbs and the traditional city centre commenced on a trajectory of gradual decline (Yunos 2011). Today, despite catalyst rejuvenation projects undertaken in the 1990s, the CBD is still characterised by a large number of decayed buildings, struggling businesses, vacant premises and importantly the area is not frequented by local Bruneians.

Waterfronts around the world have become the key sites of urban regeneration with the power to recapture economic investment,

create popular public places and trigger the essential engine to propel the city as a cultural destination (Dovey 2005). Bandar Seri Begawan CBD is not only the traditional city centre but also a major waterfront destination (the city of three rivers) offering excellent opportunities for urban transformation.

Project Brief

The Conceptual Master Plan for Bandar Seri Begawan Waterfront Precinct is an international joint student project which includes the 5th year students from the Faculty of Architecture and Design, University Putra Malaysia, (Architecture Program) and the final year students from the Faculty of Arts and Social Sciences (Geography and Development Program). The subject area, located in the CBD of Bandar Seri Begawan, is bounded by Jalan Kianaggeh to the west, Jalan Elizabeth Dua to the north, Jalan Stoney to the east and Sungai Brunei and Kamoung Ayer to the south (Figure 1).



Figure 1: Aerial View and Boundary of the Subject Area. Source: Google Earth

The major aim of the project is to provide students from both universities with

knowledge, skills and creative thinking set in a collaborative multidisciplinary framework sufficient to address contemporary urban issues and promote sustainable and climate responsive urban design and planning.

The project is divided into two phases. Phase 1 is the data collection and analysis which include an existing land use analysis, existing physical links to surrounding areas, existing buildings, streets and public space typology and culminated by a SWOT (Strengths, Weaknesses, Opportunities, and Threats) analysis and a TOWS (Threats, Opportunities, Weaknesses and Strengths) matrix. Phase 2 is the conceptual master plan proposal which include a long term vision for the area, preferred land use strategy, future connectivity urban design guidelines for streets and buildings. This phase focuses on the physical revitalisation of the subject area. The final format of the projects includes maps, illustrations and a written report.

Objectives Of The Project

As part of the project brief the following objectives are identified:

To prepare a conceptual Master Plan for the Bandar Seri Begawan Waterfront focusing on the physical environment including the interrelation with the surrounding areas;

To develop a strong emphasis on tropical climate responsive design and planning;

To provide a pedestrian friendly environment along the Bandar Seri Begawan (BSB) waterfront; and

To develop a unique sense of place and identity taking into consideration the basic socio-economic issues, local culture and traditions sustainable future public transport, and urban revitalisation.

The main long term vision statements of this project include: 1) to transform Bandar Seri Begawan as the leading city in tropical and sustainable architectural and urban design while conserving its cultural and heritage uniqueness; and 2) to create a well-connected, vibrant and liveable city, featuring mixed land uses and a user-friendly waterfront.

Site Analysis

A comprehensive site analysis is conducted including field surveys, observations and primary and secondary data collection. The secondary data collection aims to identify linkages between urban revitalisation, urban renewal and urban regeneration. The primary data collection involves ascertaining the existing land uses based on field data collection, observations, and visual analysis of the site. The field surveys and observations focused on existing land uses, physical and visual connectivity, streets and public spaces and existing building design. The major findings of the analysis are supported by a SWOT analysis and strategies in the TOWS matrix. The images of the existing are shown in Figure 2.

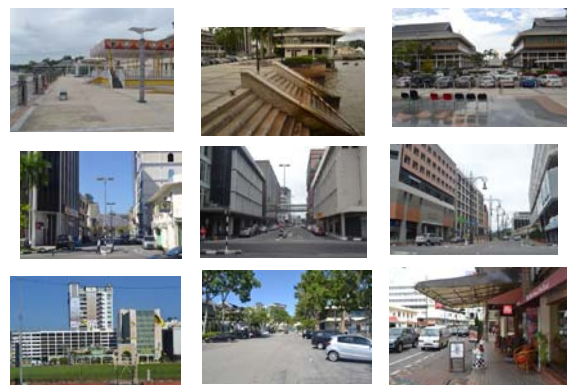


Figure 2: Images of the Subject Area: The Bandar Seri Begawan Waterfront (top), major streets (middle), The Padang and surrounding streets (below) Source: Authors

Master plans prepared for central parts of Gold Coast and Brisbane, Queensland Australia and Urban Design Guidelines for Kuala Lumpur City Centre are used as precedent case studies for this project (Dewan Bandaraya Kuala Lumpur 2014, Gold Coast City Council 2011, Gold Coast City Council 2009, Brisbane City Council 2011, Centre for Subtropical Design, Queensland University of Technology 2010).

Research Methodology

The methodology of the research is based upon the formulation of the project brief and four objectives. The major technique methods used in this research include field surveys, observations and selected case studies including streets and public spaces located in Bandar Seri Begawan CBD Waterfront Precinct. The analysis of existing built environment is based on primary data including land field surveys and observations.

Major Outcomes: The Conceptual Masterplan (Design and Planning)

The Conceptual Master Plan contains planning and design strategies proposed by the students. For the purpose of the Conceptual Master Plan the students from UPM and UBD (48 students in total) are divided equally into four groups focusing on the following themes; land use, connectivity, streets and public spaces, and building design.

Land Use Strategy

By 2040, the function of the BSB CBD Central Business District will be enhanced with mixed land use, local culture, commercial and infill development, and a sustainable community using the waterfront as a catalyst project to create a vibrant and liveable city (Figure 3).

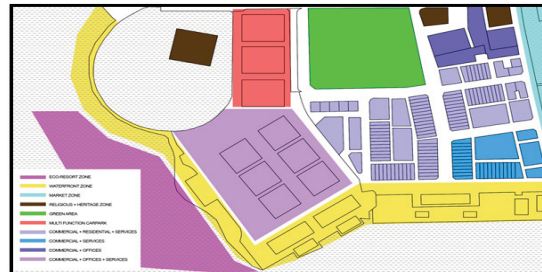


Figure 3: Land Use Strategy. Source: Conceptual Master Plan for Bandar Seri Begawan Central Business District Waterfront Precinct

The provision of multi-storey residential development within the CBD will allow people to settle in the area, and as a result reduce car dependency and encourage pedestrian movement. The new proposed land use designations in the area include an eco-resort zone, the waterfront zone, market zone, religious and heritage zone, green area, multi-function car park, commercial, residential and services zones. Strong emphasis is placed on encouraging informal activities such as temporary markets and food stalls.

Connectivity

It is envisaged to establish Bandar Seri Begawan CBD as the heart of Brunei that is

well connected, easily accessible by variety of fast and efficient transportation modes linking to other major destinations in Brunei.

The connectivity strategy addresses visual and physical links on the macro scale and local micro scale. The macro level looks into the connectivity of Bandar Seri Begawan CBD to its surrounding major activity nodes while the micro level focuses on the connectivity within the CBD itself. Both levels highlights the use of public transport, blue-ways and green-ways (Figure 4).

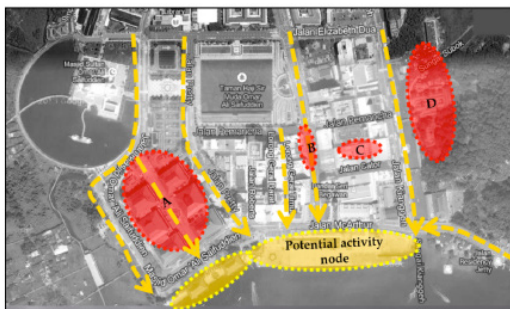


Figure 4: Connectivity Strategy. Source: Conceptual Master Plan for Bandar Seri Begawan Central Business District Waterfront Precinct

Green-ways are shared cycle and pedestrian routes softened by tropical tree planting and identifiable surface treatments. Blue-ways are the potential linkages for private and public water transport.

Streets and Public Places

It is envisaged to reinforce Bandar Seri Begawan as a major centre of sustainable tropical design for streets. It is proposed to revitalise existing streets by applying tropical design measures to create a pedestrian friendly environment, recreational spaces and a car-free zone along the entire waterfront. The streets of the CBD will be revitalised as comfortable, safe, and well-designed public spaces including contextually appropriate street furniture, floor surface, LED lighting and landscaping which reflect the local tropical climate.

Based on the fieldwork and observations, five existing street typologies are identified including local connector, main shopping street, local street, character street, lanes and alleys.

The urban design guidelines prepared for every street type identify desired visual outcomes for the streets including the provision of tree planting and soft landscaping, quality street furniture, provision of active frontages along the ground level of buildings, creation of extended pedestrian sidewalks and the provision of tropical climate responsive surface materials (Figure 5).

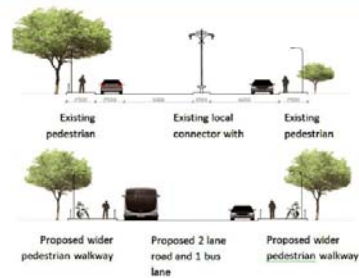




Figure 5 : Design Guidelines for Streets. Source: Conceptual Master plan for Bandar Seri Begawan Central business District Waterfront Precinct

Building Design

It is proposed to develop the CBD a leading precinct in sustainable architectural development incorporating the cultural and heritage uniqueness of Brunei. The integration of innovative technologies and the use of renewable energy in architectural design, as a driver to boost Brunei's economy are recommended.

Special emphasis is placed on passive design. In order to reduce the exposure of direct sunlight, new buildings should be oriented in the north-south direction, employ low thermal mass materials, use appropriate shading devices, display facade rhythm and articulation, provide semi-outdoor spaces, use of insulation, provide horizontal and vertical landscapes, promote light colours and heat reflecting surfaces (Figure 6).

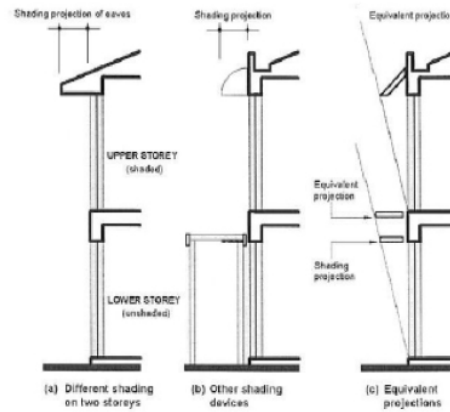
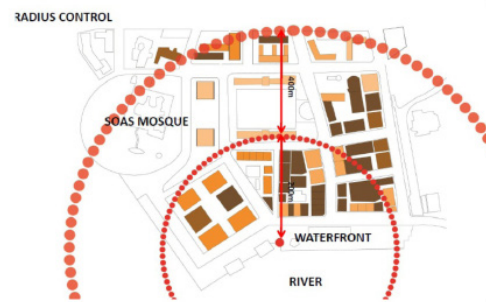


Figure 6: Building Design Guidelines. Source : Conceptual Master Plan for Bandar Seri Begawan Central Business District Waterfront Predict

All the heritage listed buildings will be addressed in terms of the characters, materials, techniques and architectural details. The form and architectural expression of future buildings should reinforce CBD's



heritage character and represent the Malay Islam Beraja (MIB)² style.

Conclusion

The students responded well to the design brief and demonstrated the ability to work in collaborative manner and to conduct deep insight analysis supporting their design proposals.

The project was presented to the external stakeholders including the Chairman of Bandaraya Bandar Seri Begawan, representatives from the Ministry of Development and the Town and Country Planning Board. It received positive feedback from all the external stakeholders. The project has opened an avenue for cooperation and joint research projects between the Faculty of Social Sciences UBD and the Faculty of Architecture and Design, UPM and has already triggered a joint international research project focusing on the performance of public spaces in Bandar Seri Begawan CBD against a set of recognised design criteria for tropical design.

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Note:

i The term "master plan" is used to describe a strategy for physical revitalisation or development of an area. It encompasses a multitude of factors which relate not only to the physical aspects of planning, but also to non-physical aspects such as economic and social issues (Commission of Architecture and Built Environment 2011). For purpose of this study a conceptual master plan is limited only to the built environment.

ii. Malay Islam Beraja is the officially proclaimed national philosophy of Brunei Darussalam (Brunei Sultan Hassanal Bolkuiah Muizzaddin Waddaulah Handbook International Publications USA)