



Landscape as Urban Ecotone

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Introduction

Ecotones are change over zones that may be predominantly sensitive to both natural and human-related disturbances to the environment. It is a transitional area between two dissimilar ecosystems, and encompasses elements of both bordering communities as well as organisms (Wang et al., 2014).

Therefore, an ecotone can be deemed as a zone of transition between two contiguous ecological systems, having a set of characteristics distinctively dened by space and time scales, and by the strength of the communications between adjacent ecological systems (Di Castri et al., 1988). Ecotones can be studied at any classified level from inhabitants to global, or at any spatial scale from an individual habitat patch to panoptic. Correspondingly, transitional zones may represent landscape boundaries that provide some degree of stability between neighboring habitats (van der Maarel, 1976; Wiens et al., 1985; Holland, 1988). Both natural and human-related instabilities can modify transition zones between adjacent ecosystems.

Ecotones can also transcend between disciplines. In the discipline of landscape architecture a variance of the ecological planning and design is not a new phenomenon (Haaren et al., 2014). This divergence of planning and design may potentially expand the range of possible methodological and ethical approaches in landscape architecture.

Background

The final comprehensive project involves large-scale landscape projects for numerous

urban contexts where sites are located at two different ecological sites known as ecotones. The big challenge is how students need to design with respect to the integrity of the divergence ecological system. It is believed that landscape architects could be key players in recuperating ecological systems in urban area.

Design Solution

Four artifacts for the ecotone design in urban design were chosen as case studies.

1). Revival of Falim Railway as a Lively Momento (By Noor Farhana Ibrahim)



Figure 1: Master plan of new city of Falim Ex-Falim Railway.

The abandoned workshops and railway located near Ipoh, Perak have high potential and historical traces. The dying area is surrounded by vibrant residential, factories,

small workshop and institutions. Through the comprehensive study and analysis carried out by Noor Farhana Ibrahim, the importance of the new development for that area including mixed development can be a catalyst for future growth. She found out that creating a "new city" directly or indirectly can be a connector for the surrounding area, with easy accessibility by road and rail, and become a very strong character as a landmark for the area (Figure 2).

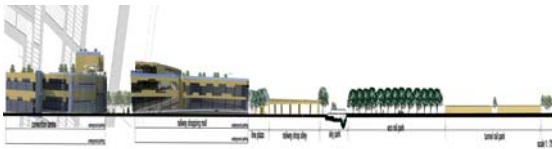


Figure 2: Cross sectional show connection of the new development to the surrounding area

Giving new life to old railway track and bridge functions as a connector from the existing Ipoh Railway Station straight away into the heart of the new city. This new development will definitely will bring new concept with different approach and with a goal to create new hope for the people (Figure 3).



Figure 3: Rail bike riding at eco rail park

It is very important to have open spaces within the development that can act as catalyst to ensure other spaces within the area can be connected seamlessly. In this case, the existing Kinta River acts as a place for people to interact. Both sides of the river bank will be developed as a friendly recreational area, as shown in the sectional drawing where it will bring people close to the water and at the same time change people perception towards the functioning of the river. The existing mature Samanea saman along Jalan Spooner will be preserved to give good view and highly comfortable ambiance for strolling and walking. Only few additional adjustments to suit development requirements will be added while most of the existing trees and landform will be preserved and conserved. The new city will bring back nostalgia of yesteryear for the people, as well as create new spaces for them to explore and enjoy. Noor Farhana's idea is to ensure that the area will be fully utilized and achieve the concept of A Lively Momento, she also proposed the area to be connected and linked with existing Kinta River as one of accessibility and landmarks by pedestrian links and river walks.

ii) Remembrance the Islamic Legendary at Puteri Harbour Promenade (By Farra Suhaida Salleh)



Figure 4: Master plan of Islamic Legendary at Puteri Harbour, Nusajaya

The work designed by Farra Suhaida intends to enhance planning of Puteri Harbour and a community center as the existing design is mundane spaces. The existing Puteri Harbour is a public open space located in Nusajaya, Johor. The park is created to promote coexistence of past the Islamic Legendary warrior through linkages and connectivity of various urban elements and activities. Farra Suhaida idea is to show a strong justification and well-defined conceptual design between ecological divergences along the pier (Figure 4).

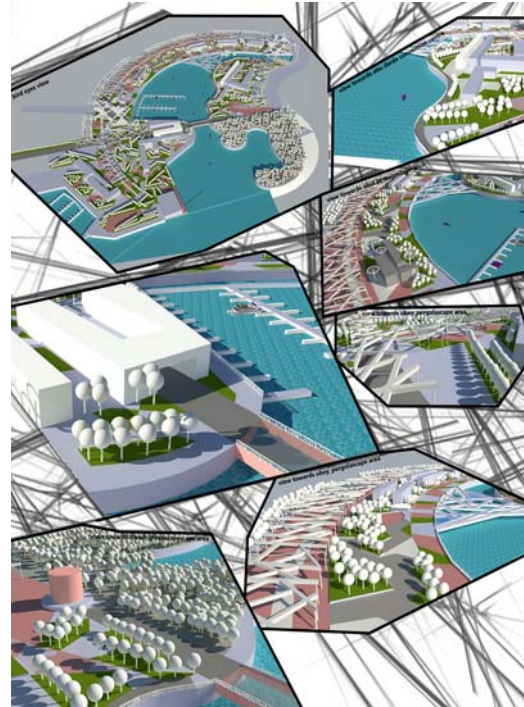


Figure 5: Perspective of Islamic Legendary design at Puteri Harbour, Nusajaya.

The integration of spaces is to blend the divergence between two ecological systems. It is clear that the complexity to merge the rather typical waterfront landscape design with urban landscapes involves ecotone as a new challenge. The design interestingly portrays and emphasizes the importance of restoring and sustaining nature and various ecological systems in urban landscape area. Farra ideas of integrating spaces and activities between ecotone for people to enjoy urban life while experiencing flora and fauna habitats along the Puteri Harbour pier. (Figure 5).

iii)Kuala Terengganu Waterfront as Ecotone Zone (by Mustaza Farbi)

Mustaza Fabri Amir has chosen waterfront in Kuala Terengganu where the area is a reclamation land located in the middle of cultural and historical place such as Kampung Cina and Pasar Besar Kedai Payang. To solve the issues of lack of green spaces and local identity, he envisioned the waterfront to be a vibrant place in terms of economic, social, culture and natural resources. His aim was to create a place where people can experience and value aesthetic components in his design through art and culture such as sculpture, and Terengganu local plants such as *gajus* (*Anacardium occidentale*), *kelapa* (*Cocos nucifera*) and pinang (*Areca catechu*). He proposed design concept Conexion which is to connect people from one place to another place through three components: life, play and learn (Figure 6).

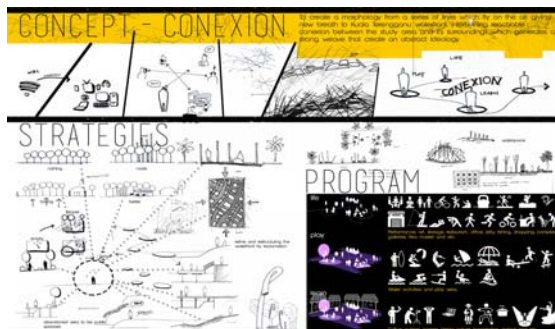


Figure 6: Conceptual idea

Mustaza's idea to enhance the sense of life, play and learn and attachment to the river, in this part of Sungai Terengganu will be revitalize and connect to the waterfront area. Thus the river corridor was designed for public and tourist needs with riverfront plaza,

riparian walkway, cultural performance area and resting places. Areas such as the mini park, the playground, the multipurpose plaza, and the amphitheatre are provided to support the activities. Nevertheless, the interesting part of Mustaza's design is to connect one space to another space by creating different experiences for the visitors. Cultural activities such as night market and cultural performance enhance users experience in the waterfront.

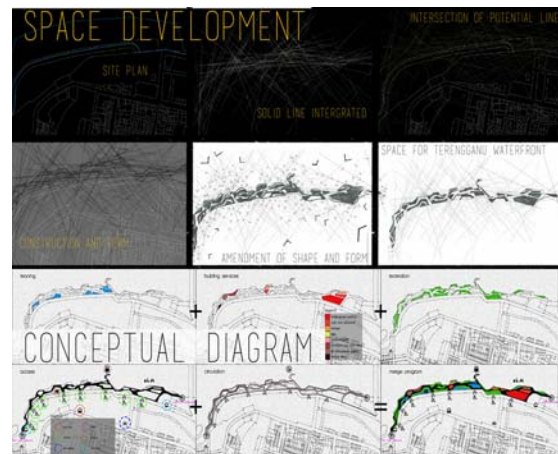


Figure 7: Conceptual diagram for project area.



Figure 8: Master Plan of Kuala Terengganu Waterfront as Ecotone



Figure 9: Detail area plan (iv) Brickfield Nexus (iv); An Urban Ecotone Zone (By Izhah Abdul Rahman)

Sungai Kelang in the middle of Kuala Lumpur was a very important natural resource and transportation route but yet its existence has been neglected for many years. Realizing the importance of Sungai Kelang values to Kuala Lumpur, Dewan Bandaraya Kuala Lumpur has developed a comprehensive plan to revitalize the river as a commercial, social and ecological hub. The first phase of the project will concentrate on the historic core of the city at the confluence of Kelang and Gombak River. Noting the significant of the development to the surrounding areas, Izhah Abdul Rahman, explored how the western part of Kelang River, near Brickfield, could be developed. The western part of Sungai Kelang is surrounded by residential areas, notably of Indian community. In

addition, the area is also very close to major transportation hub such as Kelang Bus Station, KL Sentral and Old Kuala Lumpur Railway Station (Figure 10).

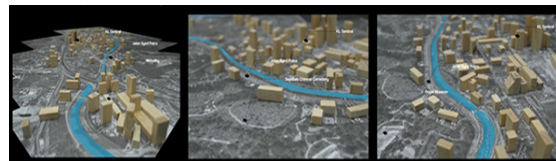


Figure 10. Analysis of the Sungai Kelang and Brickfield

To develop the sense of community and attachment to the river, this part of Sungai Kelang will be revitalized. Thus the river corridor was designed for residential needs with river plaza, riparian walkway and resting places. Apart from that, a cultural zone was proposed to enhance Indian culture that is very important for Brickfield image and character (Figure 11).

Conclusion

Water resources play an important role in the development of ecotone design in riverfront area which can enhance the landscape features and spatial articulation (Shen, Q., et al. 2014). Therefore as stated by Yazid (2011), landscape design as urban ecotone put forwards a clear vision of the need to promote quality living for urban city dwellers.

In conclusion these selected artworks have shown the innovative thinking in urban ecotone in landscape planning and design and arouse a new dimension in connecting in divergence ecological ecotone towards quality living environment.

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