



Journal of Art, Architecture and Built Environment (JAABE)

Volume 4 Issue 1, Spring 2021

ISSN: 2617-2690:(P) 2617-2704:(E)

Journal DOI: <https://doi.org/10.32350/jaabe>

Issue DOI: <https://doi.org/10.32350/jaabe.41>

Homepage: <https://journals.umt.edu.pk/index.php/JAABE>

Article:

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Article DOI:

<https://doi.org/10.32350/jaabe.41.01>

Article
History:

Received: 6 August, 2020
Revised: 25 February, 2021
Accepted: 5 March, 2021
Available Online: 24 May, 2021

Citation:

Choi, H. S. S. (2021). Sustainable development of Lantau city in
Hong Kong through enhancing the cultural, social and
economic values. *Journal of Art, Architecture and Built
Environment*, 4(1), 01–13.

[Crossref](#)

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Journal QR Code



Article QR Code



Indexing



A publication of the
School of Architecture and Planning
University of Management and Technology, Lahore, Pakistan

Sustainable Development of Lantau City in Hong Kong through Enhancing the Cultural, Social and Economic Values

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Abstract

Sustainability is much more than simply protecting the environment. It requires a long-term vision for catalyzing the positive change that leads to sustainability in economic, social and environmental contexts. The current environmental problem is not simply related to the environment; rather, it encompasses the reconstruction of social and cultural issues in addition to economic policies that take into account natural capital as a resource. Considering the overall planning and design strategies in terms of sustainability, the most important fact is that the built environment is largely determined by the communities that dwell there and the buildings reflect the needs of the individuals and the various key actors, physical and social structure, and the physical location of the built structures. The current research is focused on the Lantau City in Hong Kong. It is a case study to determine the role of the cultural and social values in inducing sustainable development. The results showed that the consideration for the cultural and social capital, while moving away from political and economic ideologies, causes the success of sustainable development.

Keywords: cultural, Hong Kong, Lantau City, social sustainability

Introduction

Sustainability is a key issue in urban transformation and development in the 21st century. This is reflected in two recent publications from the UN: the ‘Sustainable Development Goals’ from 2019 and the ‘2020 Biodiversity Strategic Planning and Global Biodiversity Framework’. These include a multi-disciplinary debate on how to achieve responsible and sustainable development. Sustainability means more than the protection of the environment; it requires a long-term vision for catalyzing positive change leading to sustainability in both the social and environmental contexts. As such, global movements and goal-setting need to reflect the distinctive nature, characteristics and identities of each city, integrated with the identity of the inhabitants and their social and cultural values.

The fact that, environmental crisis at local, national, and international levels has made societies all around the globe to follow a certain type of urban model that

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includes guidelines and policies on sustaining the environment. But progress in the urban infrastructure has also led to the breakdown of social and cultural norms that societies follow. Increasing the environmental impact within the built form also led to the erasure of the cultural and identity features (cultural sustainability) of the historic monuments.

In short, a solution of the environmental problem not only has to do with the environment but with the reconstruction of social and cultural basis, as well as reconstituting the economic policies that take into account the natural capital as one of the sources for the future.

Considering this collective determination for achieving sustainability, this paper provides a spatial assessment based on a completed project: the Swire Leadership Centre (SLC) on Lantau Island in Hong Kong, as a case study which can suggest new possibilities for both designers and decision makers. The assessment is focused on how new environments and structures can be designed to achieve both environmental and cultural sustainability in a way that provides a rooted yet future oriented link between the local environment and the local culture, not only in Hong Kong, but also in other places. Moreover, the project has been reviewed with a holistic view of the organization's work from policy conception to implementation and internal operations management.

Over the last 25 years, the UNFCCC and other international societies (FSD, IISD, ISDRS and ISBE) have proposed that governments worldwide should address the rising levels of air pollution and greenhouse gases produced within cities. Given that the natural energy resources are finite, these recommendations and proposals include special consideration for alternative approaches for the consumption energy considering urban development.

Urban development and infrastructural growth have impacted the climate in developing countries, including within the South East and East Asian region. To continue development and growth there is a visible need to consider and adopt alternative approaches for energy consumption. As is the case in densely populated areas worldwide, energy efficiency in buildings encompasses the most diverse, largest and most cost effective opportunity to tackle climate change such as in Hong Kong. The building sector is the biggest user of energy in the city, with most of the energy consumed by buildings after construction is completed. For example, recent statistics regarding Hong Kong (Hong Kong Energy End use Data, 2018) show that consumption associated with the built environment are as follows:

- In 2018, the Residential Sector of Hong Kong consumed 61,439 TJ of energy with 43,120 TJ being electricity (GHG emission figures as published by Environmental Protection Department). The energy and electricity increased by 13.8% and 21.7% for the period 2006 - 2016 respectively (Increased at an average annual rate of 1.3% and 2.0% respectively).
- In 2018, the Commercial Sector of Hong Kong consumed 123,969 TJ, around 83.8% or 103,881 TJ of which was electricity. The energy and electricity increased by 10.8% and 11.3% for the period 2006 - 2016 respectively (increased at an average annual rate of 1% and 1.1% respectively).

Besides, at a strategic level, the “Sustainable Lantau Blueprint” from June 2017 is the most recent development proposal that attempts to address this question, by reconsidering the relationship between the natural habitats, sustainable wildlife and planning strategies for Lantau Island. In collaboration with the Lantau Development Advisory Committee (LanDAC) and taking into account the public’s view gathered during the public engagement exercise carried out between January and April 2016, a Sustainable Lantau Blueprint guiding the future development and conservation for Lantau was formulated. Following the overarching planning vision during the formulation of the Concept Plan and Revised Concept Plan for Lantau in 2004 and 2007, the proposed planning and development framework for Lantau shows the overall strategy formulated under Hong Kong 2030+ below (LantauTask Force the Concept Plan);

- (i) Developing East Lantau Metropolis (ELM) as a strategic growth area (SGA):
 - with a capacity of accommodating population of about 400,000 to 700,000 and creating employment of about 200,000;
 - with the third Core Business District (CBD3) as a new and smart financial producer services hub at a strategic location bridging Hong Kong Island and Lantau;
- (ii) Developing various economic nodes in northern Lantau as an important component of the Western Economic Corridor;
- (iii) Conserving the natural and cultural assets of Lantau as Hong Kong’s treasure; and
- (iv) Forming a strategic transport corridor linking Northwest New Territories (NWNT)-Lantau- ELM-Metro Area to support the proposed ELM and territorial development.

A key element of the blueprint was the construction of a new island. The fundamental goals of this new city were described as: the social and population redistribution, spatial reorganization, attracting global investment to support industrial growth at the local level, and the forming of a finance and economic hub in Lantau to link Macau as well as Mainland China at the international level (Park, 2004; Sungkyun, 2004). Lantau has rich cultural heritage, extensive country parks, well-preserved religious traditions, fascinating tourist attractions and a vibrant new town. With vast diversity at such a strategic location, Lantau provides opportunities for strategic economic and housing development at the northern shore along with the conservation of natural and cultural resources, sustainable tourism and recreation uses at Lantau which would ensure the long-term sustainable growth of Hong Kong.

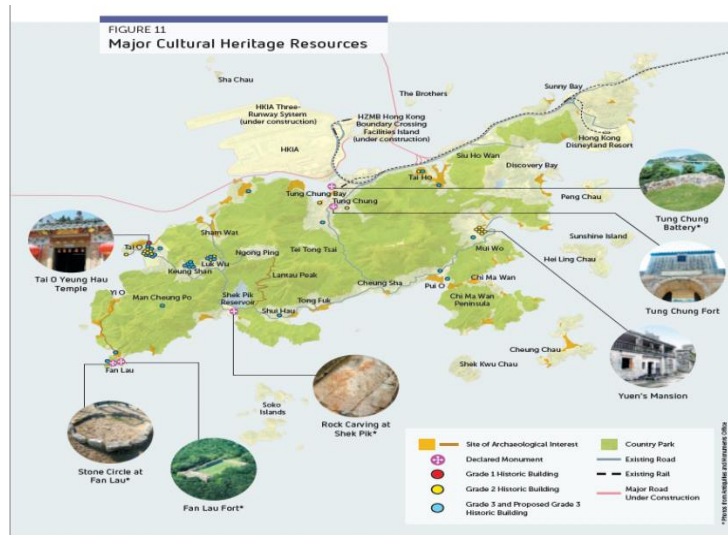
To achieve a vibrant and holistic community, the government reviewing the sustainable development plan proposed to provide sufficient education, health, leisure, recreation and community facilities and an open public space. However currently (2020) no further detail on how this will be achieved has been published. In terms of neighborhood and community development as a policy of sustainable development in Lantau, the green pathway along the north park of Tung Chung and pedestrian promenade aligned with the waterfront provides a new walking zone which as proposed will eventually be developed into a town park connecting the west and the town centre of Tung Chung, as a means to facilitate a pedestrian friendly environment.

In terms of cultural sustainability, Lantau is one of the earliest settlements in Hong Kong and possesses a wealth of monuments, historic buildings and sites of archaeological interest. There are 5 declared monuments: the Rock Carving at Shek Pik, Stone Circle at Fan Lau, Fan Lau Fort, Tung Chung Fort and Tung Chung Battery, including Yeung Hau Temple (Grade 1 historic building) and Kwan Tai Temple (Grade 2 historic building) in Tai O, Yuen's Mansion (six Grade 2 historic buildings) in Mui Wo, Hau Wong Temple (Grade 2 historic building) in Tung Chung (see Figure 2). As such, there are a number of significant activities and heritages of archaeological and cultural value to sustain, such as the renowned Po Lin Monastery and the Dragon Boat Water Parade in Tai O which is included in the list of China's national intangible elements.

In addition, the Government is expediting land supply in a multi-pronged approach, e.g. re-zoning of under-utilised GIC sites and identification of possible cavern areas for relocation of government facilities and hence releasing land for residential, commercial or other uses.

Figure 1

Major cultural heritage resources in Lantau (source: LanDAC, p35, 2018)



Spontaneously, in terms of infrastructure, the Government has identified a number of Strategic Cavern Areas in MuiWo and North Lantau (near Sham ShuiKok, Siu Ho Wan and the surrounding area of Tung Chung) under the Cavern Master Plan (Figure 4), including sewerage, waste disposal systems and water supply facilities, to release their original surface sites for more beneficial uses.

In terms of a spatial network to meet the transport needs arising from a sustainable Lantau development, the planning and implementation of a comprehensive traffic and transport infrastructure network is planned that not only comprises of strategic railway and road systems in support of the proposed strategic developments in North Lantau but also water transport and transport facilities which are considered to enhance the internal connection and accessibility of Lantau.

Considering the overall planning and design strategies in terms of sustainability, the most important thing to initiate is that the built environment is largely determined by the communities that dwell there and the buildings reflect the needs of the individuals (Bentley, 1999; Carmona, 2003; Lee, 2002). However, when identifying a response to the issues of sustainability within the built environment it is sometimes difficult to define the key milestones to be considered in relation to physical, social, economic and scientific contexts.

Figure 2

Strategic Cavern Areas in Lantau (source: LanDAC, p27, 2018)



The physical environment includes the heritage, buildings, natural resources, geography, metabolism, biodiversity. The social environment includes the lifestyle, local knowledge, celebrations, traditions, symbols, myths and beliefs these are the collective subjective value for development. However, cultural sustainability also defends the expressions of individual subjectivity: creativity, diversity and freedom of expression.

Understanding this, a deeper and holistic understanding of the urban components of sustainability is a challenge when assessing the merit of individual proposals. For instance, MuiWo in Lantau has its tranquility and rural township character. Through re-planning and optimization of existing under-utilized land together with the possible development, MuiWo could be revitalized as a better town with local character. With small, low-density residential developments as well as balancing the needs of development/ improvement and preservation of MuiWo's local resources and ecosystem this is a way to retain the local heritage and cultural values.

This understands the need for sustainability and sustainable design to recognize the value of culture that characterizes both the social and physical environment—natural and built. For this reason, the understanding of sustainability not only involves recognizing how culture has shaped the physical and social environment - as a first principle of efficiency but also because it leverages the existing and learns

from what already has been established. It also ensures freedom of expression of any individual or group in any format as well as “universal access to culture and its manifestations, to information and resources.” In other words, it understands that the new should not be built on nothing but contextualized in the cultural framework that houses it, thus not only recognizing the value of the existing expressions of subjectivity but encouraging new collective as well as individual ideas.

So this sustainability advocates ‘Identity’ as one of the main concepts on which to build sustainable development: it not only derives it from the existing identity - embodied in the physical and social- but from the promotion of new individual and collective identities as well.

In short, a culturally sustainable action encourages the society to recognize and identify itself with it. Thus, a society that loves and respects both the human and social, and the natural and built environment in which it lives – because it recognizes itself with them- is a more prepared, conscious, informed, free society, caring, involved, that can take on other issues of sustainable development such as “social inclusion, economic growth and environmental balance.” (Brundtland, [1987](#))

Critical Review of a Completed Project in Lantau

One private development in South Lantau that seeks to strike that balance is the Swire Leadership Centre (SLC), a new training facility for the Swire group of companies that includes Cathay Pacific, food production, distribution and property development. Swire first built a holiday park for their staff here in 1977 and the accommodation had become outdated and lacked the arrangement and facilities for contemporary training methods. Completed over a four year period 2014-2018, with a consultant team including Make, LWK Architects, Choi-Comer Asia, Wong and Ouyang and landscape designer Urbis, the new centre replaced the old, including 28 residential rooms and four large training rooms, which were arranged around a landscaped courtyard and also integrated over 350 archive items from the client’s company’s history.

From a planning and urban design perspective, the positioning and orientation of the new building, using memorable historical archive items within the landscape, gave consideration to the redevelopment of the wider Pui O and MuiWo district along South Lantau Road as part of a culturally and environmentally sustainable approach (see figure 3).

Figure 3

Swire Leadership Centre – Location Plan (source: Author, 2020)



The SLC has an architectural design and landscaped gardens that refers to the setting and topography. Nestled within the hillside, the accommodation is arranged to look both outwards and inwards.

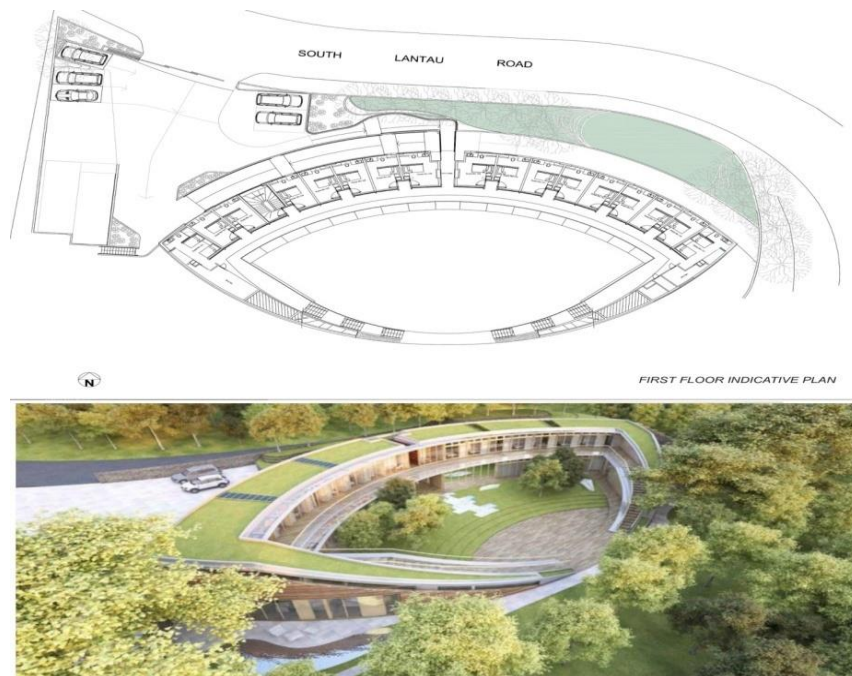
The building achieved a LEED platinum rating through the usage of a sustainable material palette including natural timber and a mechanical fan in all guest rooms to reduce reliance on air conditioning. Windows and doors at both sides of training and guest rooms further encourage natural ventilation, and a sedum roof covering provides a method of insulation that helps the building integrate both visually and environmentally into its landscape setting and surrounding eco-system.

In relation to cultural identity, the Swire group has been an important and integral part of Lantau Island over the last 30 years, particularly in relation to their ownership and management of the Hong Kong airline Cathay Pacific and involvement in the Island's Chek Lap Kok Airport, freight terminal and Cathay City administration complex. This engagement in travel and shipping has been an integral part of the company's history since its founding in 1916.

This history is illustrated in the archive of items that are placed within the common areas, access corridors and central gallery space of the Leadership Centre. The Swire motto 'Esse Quam Videri', Chinese name 太古, and 200 years of the company's history are all etched into the paneling and handrail of the building's facade around the central courtyard.

Figure 4

Swire Leadership Centre (source: Author, 2017)



The ground level interior includes three training rooms, an additional canteen-cum-multi-functional space, and central gallery space. All are connected with movable wall panels, so that the spaces can be opened up as one large space. The central gallery includes glazed partitions that allow for double sided exhibition of some of the paper archive items, including two letters from Swire staff from the early 1900s that offer an interesting insight into the expatriate life for the current staff on training, with sentences about homesickness and exotic foods perhaps striking a chord.

In the canteen a series of decorative fans from the Cathay Pacific are exhibited and provide inspiration for large folded metal paneling that runs around two walls. The canteen also exhibits company's food and beverage subsidiaries Coca Cola and Taikoo Sugar, and drinks coasters reproduced from the Cathay Pacific in flight dining.

From the bigger scale at urban level, in terms of urban design, the accessibility is limited and is for private use. Whilst the plain is open towards the sea, it is closed off to the street except for the gated parking entry. The internal courtyard landscape

design has maintained the existing trees within the site, along with a new landscape design of a sustainable species group suitable to the local habitat and ecosystem. The architectural design seeks to blend itself within the landscape setting, with a low-rise, curved form designed to provide an organic, relaxed setting.

Figure 5

Swire Archive items and restoration with different forms (source: Author, 2017)



Within that, it shows the importance of social capital based on what Bourdieu (1992) mentioned. He said (1992, p139) “Social capital is an attribute of an individual in a social context. One can acquire social capital through purposeful action and can transform social capital into conventional economic gains. The ability to do so, however, depends on the nature of the social obligations, connections, and networks available to you” Dyllick and Hockerts (2002, p133f) define two types of social capital: human capital and societal capital, where societal

capital includes “the quality of public services, such as a good educational system, infrastructure or a culture supportive of entrepreneurship.”

In fact, current archive items as value of developer’s memorability and cultural capital, the social capital refers to the society’s social attachment and belonging, and it can increase its monetary value. Knowing that, a deeper sense of understanding and causal directions are to be identified that require further attention to the complexities of the interlinks processes, and relations of these aspects from past to future, and from a sense of belonging, memorability to social and cultural values not only for a certain community but also for local and national level.

The notion of sustainability can be defined not as some fixed perfect state, but rather an evolving one that responds to both change in the form of production processes as well as ecological change. Based on this understanding, this project provides social identity of a newly designed built environment to go with the concepts of sustainable urban development, in both practice and planning strategies. From cultural heritage to cultural and creative industries, culture is both an enabler and a driver of the economic, social and environmental dimensions of sustainable development.

In summary, this project provides a new model, with suggestions for sustainable design alternatives in relation to the impact of architecture and urban design practices, focusing not only on the development of the Lantau development, but also towards sustainable urban development in other cities.

Especially, through using the particular case study of Lantau, this paper can offer some guidance towards design practice in the creation of sustainable place-making, whilst providing a basis for developing a strategy and process to achieve sustainable urban development. Also it can contribute in defining the importance of a greater consideration for cultural and social capitals in sustainable development, via a shift in political and social ideology within the urban environment.

In conclusion, the creation of a sustainable city does not only concern the creation of a more secure, more beautiful, more efficient and cost-effective city, but requires a consideration of the sustainability of urban life and the development of a built environment rooted in a cultural life that, rather than fading away can continue to restore and evolve.

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