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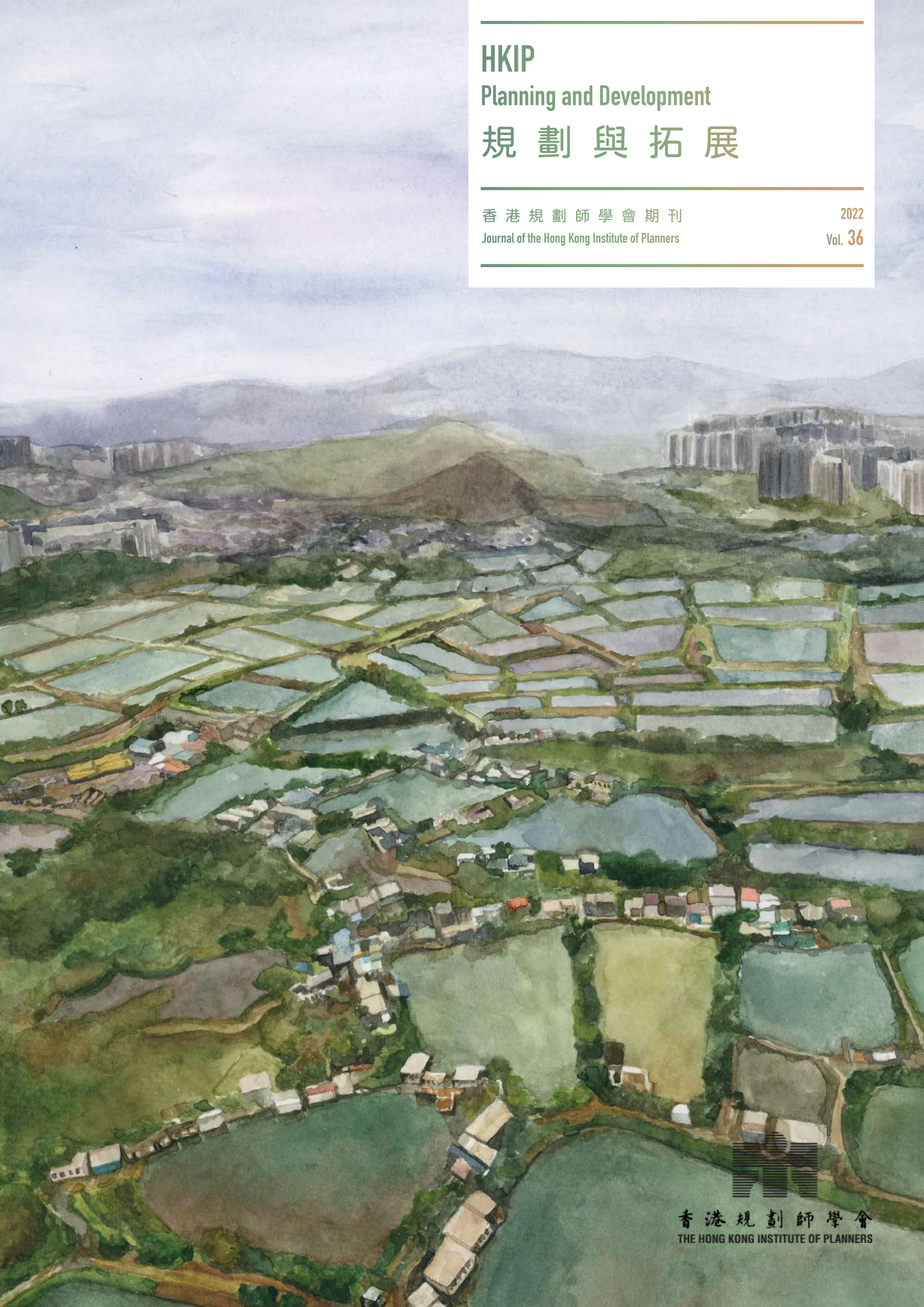

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Message from the Editors

It has been a long and challenging period since the outbreak of the Covid-19 pandemic. Many cities including Hong Kong are now adapting to the post-pandemic situation and exploring new and resilient ways for urban planning.

The current issue themed “Embracing New Development Opportunities” comes as timely to discuss and reflect the potential for Hong Kong’s city planning in the midst of pandemic recovery.

Prof. K.K. Ling and Prof. James Wong are invited to share their insights on the future directions and suggestions for the Northern Metropolis Development Strategy. The two experts highlighted the significance of the Northern Metropolis in Hong Kong’s future planning and development. They also pointed out that the Northern Metropolis presents a unique opportunity for Hong Kong planners to further enhance own expertise and experience.

Gary Yeung, President of Smart City Consortium, shares with readers his experience with smart city development in Hong Kong. The author recognized the immense potential of smart city initiatives in Hong Kong. He puts forward a number of solutions to expedite smart city development through policy formulation and public education.

As in the previous issues, the three columnists share their insights on various planning issues. Prof. Jimmy Leung brings up the ecological implications of developing the Northern Metropolis and the possibilities of ecological conservation for the development. Andrew Lam’s column discusses ways to approach the new strategic planning context of Hong Kong. Kenneth To explores various challenges in the Northern Metropolis plan.

In the Viewpoints section, T.W. Ng explores the planning significance and strategies of preparing Hong Kong for future pandemic. Julia Chan and Gary Chow present a comprehensive case study of wetland conservation through Public-Private-Partnership at Wo Shang Wai. Community Engagement Committee of HKIP shares the co-creating experience and interesting stories behind the “Curating Smithfield” Project.

In the Student Corner, Alan Cheung, Gladys Lai, Lily Leung, Jenny Li, Sophine Tsang and Kenny Yiu introduce a comprehensive spatial analysis about sustainable camping. They put forward 10 suggestions on promoting sustainable camping culture from multiple perspectives, ranging from strategic and legislation to technical and operational levels.

Last but not least, we are pleased to include two special sections in the current issue – the coverages on the 2021 HKIP Award winners and citation for the newly elected HKIP Honorary Member, Dr. Winnie Tang.

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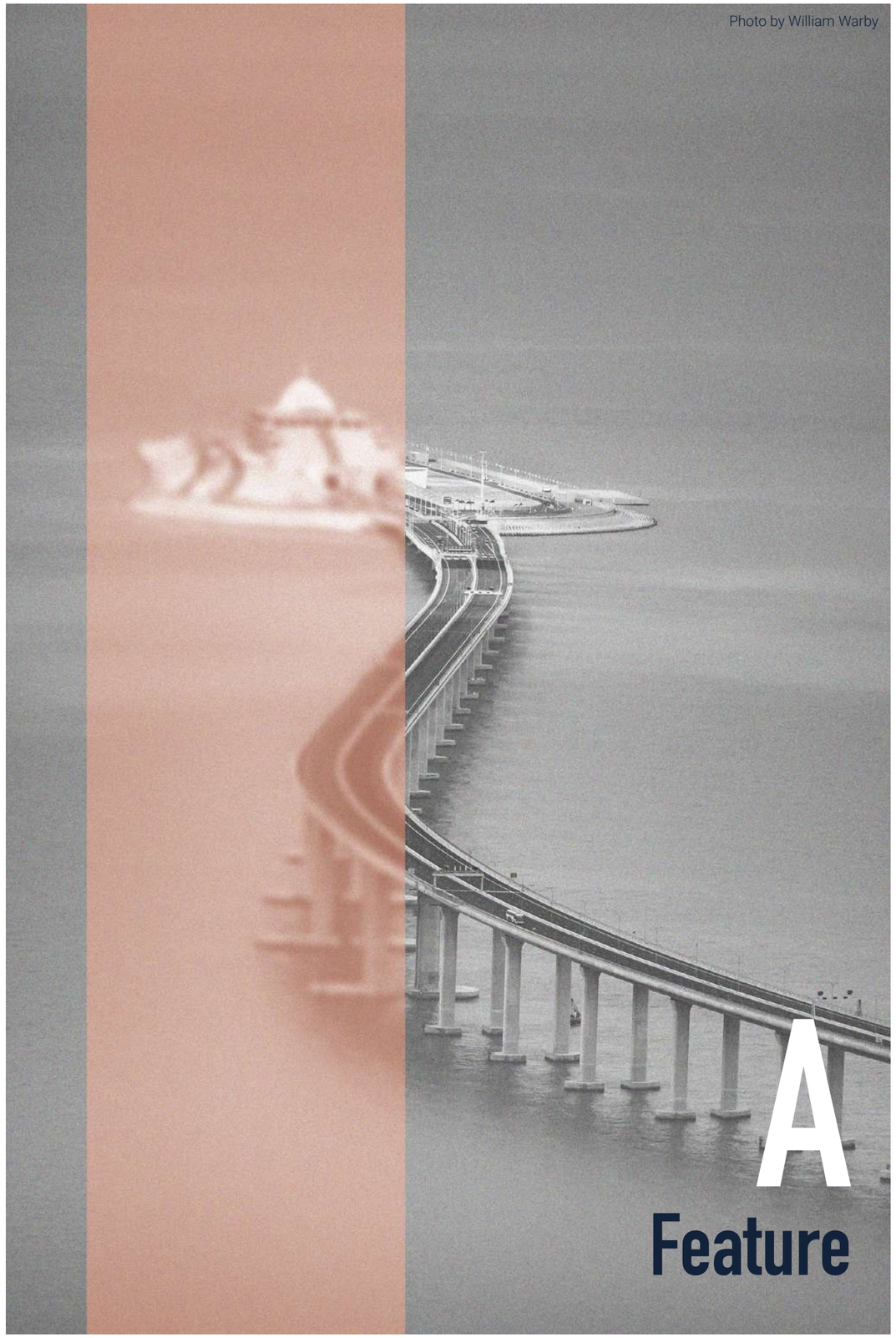

A Feature

Feature

Northern Metropolis Development Strategy: Embracing the Spearhead Development Opportunities for Hong Kong

Interview with Prof. K. K. LING (凌嘉勤教授) and Prof. James WANG (王緝憲教授)
Moderated by Dr. Kenneth TANG (鄧兆星博士)

Prof. K. K. Ling was the Director of Planning of HKSAR Government and President of the Hong Kong Institute of Planners. He is now the Director of Jockey Club Design Institute for Social Innovation of The Hong Kong Polytechnic University. He also serves the community as the Vice Chairman of the Hong Kong Housing Society, Director of the Hong Kong Cyberport Management Company Limited and Chairman of its Entrepreneurship Committee, and the Chairman of the Country and Marine Parks Board. He is also the Adjunct Professor of the University of Hong Kong and the Chinese University of Hong Kong, and Professor of Practice (Planning) of The Hong Kong Polytechnic University.

Dr. James J. Wang is honorary associate professor at the University of Hong Kong. Born in Beijing, he received his Bachelor in Economics from the People's University of China, M.Phil from the University of Hong Kong, and Ph.D. from University of Toronto. As a portcity specialist, Dr. Wang has published widely as both author and editor in many internationally refereed journals and books. He is advisor of various committees on transport or port area development, and participated in many port-city planning projects and strategic studies for major Chinese and Asian cities.

Introduction

The Northern Metropolis Development Strategy (NMDS) was published with the Chief Executive's 2021 Policy Address on 6 October 2021 (Figure 1). It lays out the positioning, strategic directions and conceptual plans for the northern New Territories (NT) over the next 20 years. Spanning across the North District and Yuen Long District, the Northern Metropolis covers an area of about 300 km2. This area of about a quarter of land in Hong Kong can bring about vast additional residential units and job opportunities.

This is the first time after the establishment of the HKSARG that a strategic development plan was published essentially as part of the Policy Address. In view of the tremendous impact of the NMDS on the future development of Hong Kong, the Editor interviewed Prof. K. K. Ling (凌嘉勤教授), who was responsible for the formulation of NMDS in his capacity as the CE's Strategic Planning Advisor for Hong Kong/Shenzhen Cooperation from 1 June 2021 to 28 February 2022, and Prof. James Wang (王緝憲教授) as the commentator to share their unique views on the future directions and suggestions for the Northern Metropolis.

Figure 1 Northern Metropolis Development Strategy

Significance of the NMDS

Editor: Since the publication of the Abercrombie Plan 1948, Hong Kong published a new version of strategic plan more or less in a ten-year interval to guide future development of the city. The Hong Kong 2030 Planning Vision and Strategy (HK2030) was promulgated in 2007, which was followed by the Hong Kong 2030+: Towards a Planning Vision and Strategy Transcending 2030 (HK2030+). The Consultation Report of HK2030+ was published in 2016 and its Final Report on 8 October 2021, which was two days after the announcement of the NMDS. Would you highlight the significance of NMDS as a strategic action plan for Hong Kong?

Prof. Ling: *The former Chief Executive (CE), Mrs Carrie Lam, in her 2021 Policy Address remarked that under the framework of "One Country, Two Systems", the NMDS "is the first strategic action agenda devised by the HKSAR Government with a spatial concept and strategic mindset going beyond the administrative boundary of Hong Kong and Shenzhen….Now that Hong Kong is back on the right track of "One Country, Two Systems", this ground-breaking and visionary plan, which maps out new action directions and approaches for the long-term development prospects of Hong Kong, bears particular significance" (para. 21, CE's 2021 Policy Address).*

As remarked by the former CE, the significance of NMDS rests with its ground-breaking approaches and visionary propositions, which may be summarized as follows:

- *the first strategic action agenda devised by the HKSAR Government with a spatial concept and strategic mindset going beyond the administrative boundary of Hong Kong and Shenzhen;*
- *formulates "Twin Cities, Three Circles" (Figure 2) as a cross-boundary spatial framework along the boundary area, which clearly recognises the integration of Hong Kong and Shenzhen as "twin cities" and indicates future close collaborations in "Shenzhen Bay Quality Development Circle", "Hong Kong-Shenzhen Close Interaction Circle" and "Mirs*

Bay/ Yan Chau Tong Eco-recreation/ Tourism Circle";

Figure 2 Twin Cities, Three Circles

- *transforms Hong Kong's boundary area from a space for accommodating cross-boundary transport corridors to a space for accommodating intensive socio-economic activities by locating large scale residential and economic development close to the existing and planned new boundary crossing points. This would fundamentally change the behaviour, operation pattern and spatial mindset of Hong Kong people and business;*

- *puts forth an infrastructure-led development approach by building five new and extended railway lines, to enhance the connectivity within the city as well as with Shenzhen;*

- *links spatial development and economic development closely to enable innovation and technology industries flourishing in Northern Metropolis as the second economic engine of Hong Kong;*

- *goes far beyond the conventional approach of industrial parks, Science Park and Cyberport by proposing the San Tin Technopole which integrates technology industry development in a comprehensive liveable community with high-quality living environment;*

- *initiates proactive conservation policy actions for "creating environmental capacity" to establish a 2 000-ha comprehensive wetland and natural coastline conservation system consisting of wetland conservation parks and coastal protection parks;*

- *adopts "Urban-Rural Integration and Co-existence of Development and Conservation" as the overarching planning principle to create a metropolitan townscape commensurate with the potential global status of the Northern Metropolis; and*

- *embeds for the first time in Hong Kong's strategic plan the proactive government policies and actions for "redressing home-job imbalance", "making sustainable communities", re-engineering the administrative mechanism and operation process" and "strengthening the radiation of Hong Kong in the GBA".*

Formulation of the NMDS

Editor: The NMDS was made known to the public in the afternoon of 6 October 2021 immediately after CE released her 2021 Policy Address in the morning. Many were caught by surprise about this comprehensive strategic plan which would trigger very large-scale urbanisation and infrastructure development in the whole northern part of the NT. The key terms such as "Northern Metropolis", "Twin Cities and Three Circles", "San Tin Technopole", etc. which are so iconic but have never been mentioned before. Would you share with us about the work in formulating the NMDS?

Prof. Ling: *The preparation of NMDS followed the established government practice for the preparation of the CE's Policy Address, which is kept strictly confidential before it is released. Nevertheless, if you are familiar with the contents of the strategic plans HK2030 and HK2030+, you would find that developing a metropolis in the northern part of NT is a logical outcome following the strategic development proposals of HK2030 and HK2030+.*

There are already three existing new towns in the northern part of NT, namely, from west to east, Tin Shui Wai, Yuen Long and Fanling/Sheung Shui. HK2030 promulgated in 2007 presented three strategic rail-based development axes for Hong Kong along the East Rail, West Rail and the proposed Northern Link which links up the East Rail and West Rail across

the northern part of NT. HK2030 also proposed the development of four New Development Areas (NDAs) in Kwu Tung North, Fanling North, Ping Che/Ta Kwu Ling and Hung Shui Kiu, which were all located along the northern axis (Figure 3).

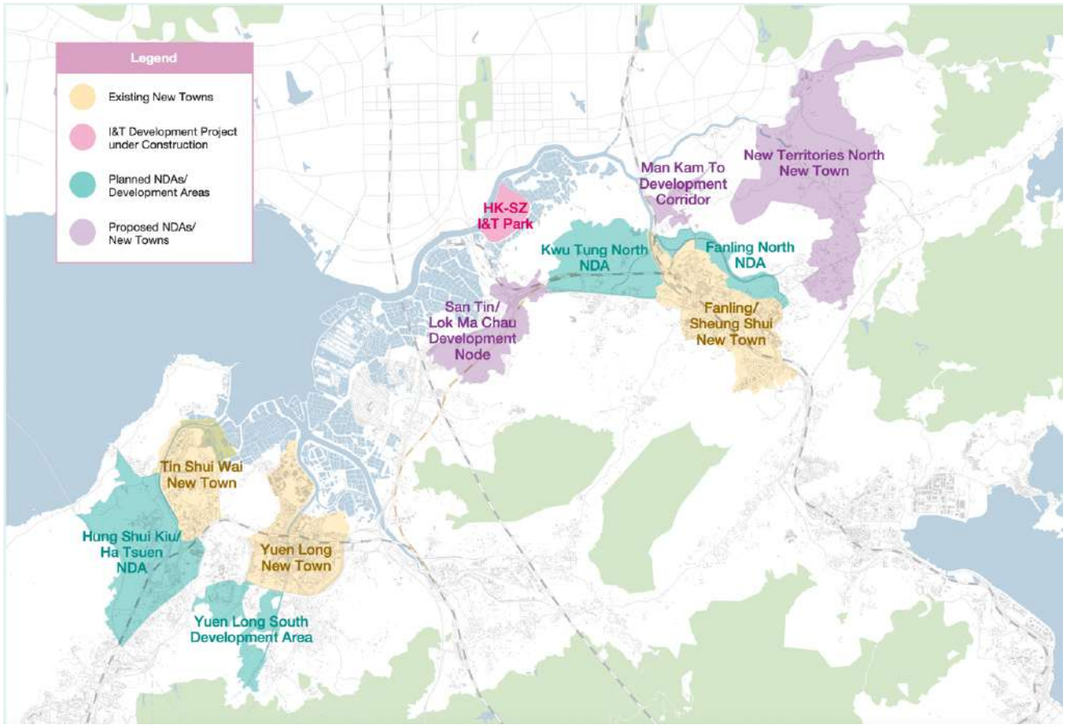

Figure 3 New Towns and NDAs in Northern Territories

The planning and engineering feasibility study for Kwu Tong North, Fanling North and Ping Che/Ta Kwu Ling NDAs commenced in 2008. However, the progress had been very slow due to lengthy political arguments and even very acute social conflicts against the development of these NDAs.

Despite the hiccups caused by political rallies against the NDAs, strategic planners of the Planning Department firmly believe that these NDAs should be implemented. Otherwise, the land and housing shortage issues would continue to haunt Hong Kong in the decades to come.

Subsequently, the HK2030+ Consultation Report published in 2016 not only re-asserted the importance of developing the NDAs in Kwu Tong North, Fanling North and Hung Shui Kui, it further proposed to expand the Ping Che/Ta Kwu Ling NDA to become a full-fledged new town named as "NT North New Town", to add Yuen Long South and Tung Chung East Reclamation as strategic development nodes and also boldly proposed the development of a 1 000-ha artificial island at the Central Waters which was then coined as the "East Lantau Metropolis". Whilst the "three development axes" pattern inherited from HK2030 was strengthened in HK2030+, the importance of the "Northern Development Belt" was highlighted due to its total development scale (Figure 4).

The Northern Metropolis is thus proposed to be made by consolidating and strengthening the Northern Economic Belt. Paragraph 16 of the NMDS Report clearly stated that "The Northern Economic Belt (of HK2030+) abuts Shenzhen and encompasses new towns in Tin Shui Wai, Yuen Long and Fanling/Sheung Shui and their neighbouring rural areas, as well as a number

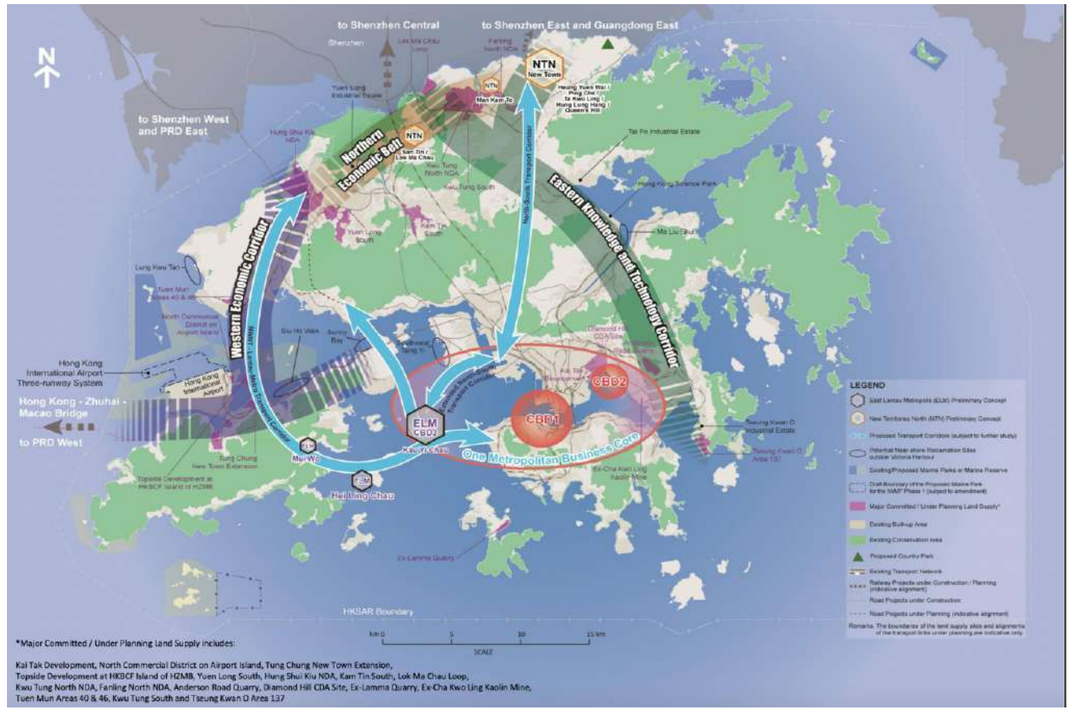

Figure 4 HK2030+ 2016 Consultation Report

of New Development Areas (NDAs) and Nodes in different planning and development stages. It is the most vibrant area where the urban development and major population growth of Hong Kong in the next 20 years will take place. With multiple land-based BCPs, the Northern Economic Belt will be the most important area in Hong Kong facilitating our development

integration with Shenzhen and connection with the GBA."

The existing new towns built in the past decades are mainly residential in nature. The proposed NDAs are relatively small in scale though quite substantial economic land has been reserved. If this conventional approach were mechanically followed, not only the territorial problem of home-job imbalance cannot be effectively redressed, the territory-wide inequitable spatial distribution of high-level government, institution and community facilities will prevail. For example, so far, no one university nor any "metropolitan class" cultural and sports facilities have been planned for the residents living in the northern part of the NT.

The conventional approach of new town development is considered not sustainable nor fair to the existing and future residents therein. Thus, the whole northern part of NT should no longer be conceptualised only as consisting of individual new towns and their extensions but should be upgraded to become a full-fledged metropolis.

Prof. Wang: *Economic activities of Hong Kong concentrate at both sides of Victoria Harbour, which has been inherited from the past as Hong Kong started as a trading port. Such development pattern has not been changed in the last one-fourth of a century after the reunification. Meanwhile, the NDAs that are being planned are mostly small in terms of its scale and mainly residential in nature.*

To grasp the opportunity to diversify the economic development, the Northern Metropolis balances the development pattern of Hong Kong by creating new industries and job opportunities for Hong Kong's young generation. The proposal signifies the government's determination to boost economic growth in the region through fostering further integration between Hong Kong and the Greater Bay Area and inducing further development potential into Hong Kong.

Though Hong Kong is located to the immediate south of Shenzhen, both cities share a very different socio-economic context. Hong Kong is facing an acute ageing problem while the population of Shenzhen is mostly aged between 15 to 29. Besides, Shenzhen has a higher proportion of immigrants when compared to Hong Kong.

With a relatively young population and influx of immigrants, Shenzhen has flourished and grown at a relatively high speed in recent years. Yet, Hong Kong is shrouded by a number of social issues and has lost its economic momentum in recent years. Thus, both cities have a very different mentality and societies apart from their different administrative systems and social structures. Owing to the differences between the two cities, they could possibly complement each other in the future through enhancing integration. The concept of Northern Metropolis proposed acts as a "Spatial Fix", from geographic perspective, to provide more opportunities for both Hong Kong and the region and solution spaces for Hong Kong to diversify its economic industries.

Fostering Hong Kong-Shenzhen Integration

Editor: Development integration between Hong Kong and the other Great Bay Areas cities is indeed not a fresh advocacy. Why has this not proceeded effectively? Why you consider there stands a better chance of being successfully with the publication of NMDS?

Prof. Ling: *There had been very diversified views within Hong Kong about integration of Hong Kong and the Mainland as well as other cities in the Greater Bay Area. Some even opposed it strongly due to political bias. I still remember very clearly when the consultation report of the Study on the Action Plan for Liveable Bay Area of the Pearl River Estuary was published in 2011, there had been very strong opposing views even alleging that Hong Kong was "being planned" by the Mainland. When the draft planning report of the NENT NDAs were published for consultation in 2013, there were claims that these NDAs would become the "backyard" for rich people of Shenzhen, despite there had been clear policy on 70:30 split for public and private housing. Whilst all these allegations were totally unfounded, it did reflect the lack of trust on cross-boundary cooperation.*

Witnessed the negative impacts on socio-economic development of Hong Kong caused by the 2019 social turmoil and the disruption of communications between Hong Kong and the Mainland due to COVID-19, the Hong Kong community understands more the value and needs of integration between Hong Kong and the Mainland. After the publication of NMDS in October 2021 until end of February 2022, there were more than 400 commentaries in the press about the Development Strategy. Overwhelming majority of the commentaries were

supportive to the proposals. This has reflected that fostering a stronger integration between Hong Kong and the Mainland is now the mainstream public view.

Indeed, integrating Hong Kong with the overall development of our country is the national policy. The National 14th Five-Year Plan not only requests for better integration, it also directed that the mechanism of fostering such integration should be enhanced. To achieve a better integration and co-development synergy, NMDS advocates that Hong Kong has to go beyond the conventional project/issue-oriented mindset. The successful implementation of the NMDS proposals requires the HKSARG working out more innovative and holistic cross-boundary collaboration models.

The NMDS has proposed five new railway projects, three of which are cross-boundary rails. The development of the Northern Metropolis will be driven by railway development which is not only required to provide transportation capacity along with the population intake but also to meet the anticipated cross-boundary communication needs. The Northern Metropolis could not flourish without the provision of mass transit infrastructure. The implementation of these railway projects will inevitably lead to formulation of innovative and effective cross-boundary collaboration models.

NMDS also provides for development of I&T industries as Hong Kong's second economic engine, where vast amounts of economic land has been reserved. This second economic engine can only be successfully developed with effective and efficient cross-boundary G to G, G to B and B to B collaborations.

Given the mainstream public view and the HKSARG's clearly declared policies to foster such collaboration, I am most optimistic that we can successfully achieve our development objectives through fostering closer and deeper collaboration with Shenzhen and other Great Bay Areas cities.

Embracing the Forefront Challenges Ahead

Editor: I&T-related industries are positioned as Hong Kong's second economic engine in the future under the National Policy. Vast amount of land has been reserved for I&T related uses, with a view to enhancing the clustering effect and promote the synergistic development between Hong Kong and the Greater Bay Area. More job opportunities, particularly the I&T related job opportunities, are planned to be provided at the Northern Metropolis. What are the potential challenges that Hong Kong might face during the planning and development of the Northern Metropolis.

Prof. Wang: *The NMDS has layout the spatial and policy framework for the creation of jobs from the current 120,000 to about 650,000, among which 150,000 would be I&T jobs. Considering the location of Northern Metropolis and its spatial relationship with the existing developed area, the Government would need to work out proactive measures that could really attract the young generation of Hong Kong to live and work there.*

Meanwhile, Shenzhen has been experiencing a rapid growth in the recent decades and thus a robust transportation network has been established. To capitalise on the geographical advantage of the Northern Metropolis by facilitating the flow of people across the border of two cities, the provision of reliable and convenient cross-boundary transport infrastructure will be essential for the success of the Northern Metropolis. Therefore, it is important to ensure timely implementation of the cross-boundary transport proposals put forward under the NMDS and even need to review opportunities to further enhance connectivity between Hong Kong and Shenzhen.

Dr. Tang: *Based on past new town experience, the early movers were usually dominated by grass-root families in public housing estates. Given the vast number of job opportunities, in particular the I&T jobs, the Government should consider taking more proactive measures to enable the future population would be benefitted from such jobs which may require higher education attainment.*

Prof. Ling: *Apart from the land use policy that mentioned in the NMDS, to unleash the potential of various industries in the Northern Metropolis, policies of different aspects would also play*

an important role, for example, population policies and talent attraction policies. Drawing on the vision of the development of Greater Bay Area and better integration among cities in the region, movement of people within the region should be facilitated and a 'two-directional' movement of talents, i.e. where Hong Kong people could work in Shenzhen while people in Shenzhen could also work in Hong Kong, should be encouraged.

Making of Northern Metropolis for Hong Kong People

Editor: After all, the Northern Metropolis should be made as a good place for Hong Kong people to live, work, play and raise their families. How can we achieve these fundamental planning objectives in the process of planning and development for the making of the Northern Metropolis?

Prof. Ling: I totally agree with you that the ultimate objective is to make the Northern Metropolis becoming a quality and promising community for Hong Kong people to live in, work and play. Proactive efforts should thus be taken to effectively coordinate the provision of government, institution or community facilities to ensure the timely provision in meeting the needs of the existing and future residents of the Northern Metropolis. Provision of territory-wide/regional based community facilities will also be provided to enhance the area as a metropolitan area.

Besides, drawing on the repeated emergence of various social and community issues arising from Tung Chung and Tin Shui Wai New Towns, early community support schemes should be devised for the Northern Metropolis. Care and support for the disadvantaged should be emphasised while developing the Northern Metropolis. This is the first time that the making of sustainable communities are written in the government's strategic planning documents.

To create a comprehensive ecosystem of "I&T" industries in the Northern Metropolis, it is vital for the government to take the requirements and latest trends of the I&T industries into consideration during the planning of the Northern Metropolis. Strategic facilities, such as university campuses, should also be leveraged while creating the integrated I&T communities with functions of "Education, Research, Industry and Residence" in the Northern Metropolis.

The Northern Metropolis has diversified cultural and natural habitats, especially large areas of freshwater wetland, fishponds, marshes and mangroves. Whilst traditional villages will be preserved, the NMDS also proposes that about 700 hectares of private wetland/ fishponds of high ecological value would need to be resumed in order to create a comprehensive wetland conservation and natural coastline protection system of about 2 000 ha for making it a quality place for our people.

Every metropolis in the globe has its own unique townscape that can present a distinct visual character to the world. Likewise, a unique metropolitan townscape should also be created for the Northern Metropolis. Not only this will establish its global status, it will also give pride to its residents and create the necessary sense of belongings. Such unique metropolitan townscape may be created by integrating urban and rural, and by taking a proactive conservation approach to enable co-existing of development and nature. Urban design should play a pivotal role in formulating the planning and development schemes in the Northern Metropolis.

Way Forward and Role of Planners

Editor: In face of the complexity of the development proposal put forth by the Northern Metropolis and the potential challenges that the proposal is facing, would you have any advice on the way forward and roles of planners?

Prof. Wang: The Northern Metropolis, may be the largest metropolitan development scheme that Hong Kong has ever undertaken under one single conceptual master plan. Hong Kong has a lot to learn.

We must admit that Hong Kong does not have a lot of experience in formulating and implementing industrial development policy. Nevertheless, there has been a lot of successful experiences in the Mainland and in Singapore that can be our good reference. Furthermore, the existing mechanism of implementing a development proposal has to be critically reviewed and enhanced. Instead of a piecemeal and project-based approach, a holistic manner should be embraced during the planning and development of the Northern Metropolis.

To achieve the intended goals of the Northern Metropolis, a closer, deeper and more

comprehensive integrated development of Hong Kong and Shenzhen has to be established. The government should take the lead in facilitating the deliberations and cooperation between bureaux/ departments and relevant authorities of Shenzhen, coordinating the planning and implementation of relevant projects and monitoring the progress of implementing the Northern Metropolis proposal.

Prof. Ling: *Owing to the uniqueness of Northern Metropolis, its implementation could not simply follow the conventional planning and development mechanism. The formulation of the NMDS is based on four attributes of innovation, namely "New Spatial Conceptualisation", "New Mindset Breakthrough", "New Policy Formulation" and "New Institutional Arrangement". This advocates that the existing structure of the public sector will have to be reformed to meet the changing demand in view of the complexity of the development proposal. In particular, a high-level dedicated government institute will proactively take the lead to steer and guide relevant bureaux/ departments involved in the planning and construction of the Northern Metropolis.*

Hong Kong planners used to focus on spatial development planning. To enable successful making of the Northern Metropolis, planners would have to develop a wider planning perspective and take a more proactive role in coordinating multiple aspects of planning, namely the spatial development planning, industry development planning, transportation development planning (in particular the railway planning), community development planning, and proactive conservation planning. Hong Kong planners should also enhance our understanding on Mainland planning and strengthen our partnership with Mainland planners. The making of Northern Metropolis does provide an unprecedented opportunity for Hong Kong planners to further develop our expertise and experience.

Post-interview Notes

The incumbent CE, Mr John Lee, published his 2022 Policy Address on 19 October 2022. He indicated clearly that "The Northern Metropolis is the foothold for Hong Kong's strategic development as well as the new engine for Hong Kong to scale new heights. The current-term Government will take forward the development of the Northern Metropolis in full steam" (para 54, CE's Policy Address 2022).

He further indicated that "The Government will establish a Steering Committee on the Northern Metropolis and an Advisory Committee on the Northern Metropolis to strengthen the governance system for the development of the area. The former will be led by the Chief Executive to provide high-level policy steer and supervision. The latter,

to be chaired by the Financial Secretary and comprising experts and stakeholders in the community, will tender advice and suggestions. The HKSAR Government will collaborate closely with the Guangdong Provincial Government, with a view to enabling the Northern Metropolis to radiate beyond its geographical boundary and creating synergy with the Guangdong Province, the Shenzhen Municipality and the GBA. A department dedicated to the development of the Northern Metropolis will also be set up next year to steer various departments and co-ordinate their innovative efforts in pressing ahead with the development. Our target is to formulate a concrete plan and an action agenda for the Northern Metropolis within next year" (para 55, CE's Policy Address 2022).

The above bold and clear statements reflected the strong policy continuation in the commitment of developing the Northern Metropolis.

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Feature

Smart City in Hong Kong: Significance, Challenges and Opportunities

Gary Yeung

Gary Yeung is a professional in TM (Technology, Media) and Smart City Development. As the founding member and President of the Smart City Consortium (SCC), Gary has focused on developing cross border applications for both Chinese mainland and Hong Kong in recent years. With growing enthusiasm, unique business insight and cutting-edge technology, he is seizing the rare opportunity of China-Hong Kong Smart City development. Apart from contributing to SCC, he also undertakes different professional roles such as Vice-President of Internet Professional Association, Vice-Chairman of Hong Kong Software Industry Association.

The Significance of Smart City Development in Hong Kong

Cities around the globe are committed to developing knowledge-based smart cities. In fact, smart city development is becoming more significant to cities in two respects. First, it allows planning to be performed more effectively, thereby addressing social issues, achieving sustainable development, and enhancing people's quality of life. Common urban challenges in Hong Kong, such as traffic congestion, double-ageing, public health risks, and environmental pollution, could all be ameliorated by integrating innovative technologies with planning solutions. For instance, smart mobility solutions like the real-time synchronisation of Artificial Intelligence and Common Spatial Data Infrastructure (CSDI), could help improve traffic conditions on major road junctions. The convenience and efficiency to be delivered by smart innovations, therefore, should not be underestimated. In the long term, people would feel the benefits in their daily lives thanks to information and communications technology (ICT) and smart city developments.

Besides, smart city development could help consolidate Hong Kong's global economic presence. As an international financial centre and logistic hub with a copious amount of fintech start-ups, Hong Kong is inherently privileged in smart financial development. Hong Kong's high regulatory standards have always attracted international businesses and talents, making the city the optimal testbed for innovative technologies and ideas. Regtech, for example, is the application of technology to elevate the efficacy of regulatory compliance and risk management during transactions. Hong Kong has the potential to become the major service provider of such technology to bridge smart cooperations between China and the international community. Riding on the city's global niche in Regtech, the government could take a step further in strengthening the connection between the Greater Bay Area ("GBA"). According to the GBA development outline, the smart city cluster ought to be developed to unleash the regional potential in smart development. ICT Infrastructure like the information-sharing networks with respective national and regional governments should be initiated and established by Hong Kong to create a synergistic system that facilitates Belt and Road cooperations. Evidently, the smart city innovations in Hong Kong would benefit not only Hong Kong, but the GBA's metamorphosis into an internationalised bay area.

Major Challenges Faced in Hong Kong and the Way Forward

To take Hong Kong's smart city ambitions to the next level and provide lasting social and economic benefits, it is crucial to identify the key challenges that are affecting our smart city development trajectory. These challenges include narrow funding sources, inadequacy of future-ready government regulation and policy, and issues relating to citizens' readiness to participate in smart city development. Over the longer term, solutions responding to these challenges should be developed and executed to make best use of ICT to enhance the city's liveability and competitiveness.

The Challenge on Funding

Smart city development requires substantial financial resources to sustain on-going research, talent training, and application of innovation and technology. Thus, adequate funding is inevitably a prerequisite for smart city development. At present, government funding is the main source for smart city initiatives. For example, the government has explored the use of ICT in supporting elderly and people with disabilities by launching a $1 billion funding scheme in 2018. Under this scheme, elderly and rehabilitation service units have been encouraged to use technology products when delivering services. As Hong Kong looks to accelerate smart city innovation and upgrade infrastructure with smart technologies, funding for those projects suggests a significant challenge of adopting smart technologies on a wide-scale basis. In the long term, this financing method may not be sustainable and our society could not rely solely on funding from the government. The single source of funds from the public sector may constrain the progress of realizing Hong Kong's smart city ambitions.

As a result, there is a pressing need to attract private investment to sustain Hong Kong's smart city initiatives. The government should consider reviewing the current financing means for smart city-related projects and initiatives. Then, it should look for more ways in which it

can work with the private sector and encourage businesses to participate in the investment of smart city initiatives. e.g., grant and subsidy. Private investors' confidence in smart city-related projects shall be boosted by realizing the strategic significance of Hong Kong. A coordinated and connected approach can be adopted to remove potential hurdles that limit opportunities for public-private partnerships. Exploring new and more innovative forms of public-private partnerships for smart city investment helps to secure additional funding from private companies. In this challenging economic period in the pandemic, it is crucial for the government to work more closely with the private sector on securing diversified funding sources that will enable smart city initiatives to achieve their objectives.

The Challenge on Policy and Regulation

Although the government has played an important role in driving smart city development, government regulation and policy concerning smart city often lags behind the development of smart technologies. As smart technologies are ever-changing, it is necessary for the government to take a holistic look at the smart city initiatives. Regulations and government policies should be future-ready to adapt to the constantly evolving ICT and smart city transformations. In Hong Kong, it is not uncommon that the development of policies and laws could not always keep pace with the advent of new technologies. For example, some neighbouring cities in the Greater Bay Area provided citizens with access to multiple government services with one smart card. Similar policies are yet to be implemented in Hong Kong. The government must be determined to bring forward smart city development into the daily life of citizens to ensure the continuing success.

As Hong Kong rolls out more and more smart development agendas, the government needs to break out of the policy tradition of non-interference. It needs to play a more facilitating role in policy making and regulation formulation to respond to the rapidly changing smart technologies. The government should realize the limits of the so-called "Big Market, Small Government" principle and actively support the market through deregulation. Taking data ownership as an example, data is the foundation of smart city projects, suggesting insights into where improvements are required and the necessary information to help decision-making and advanced planning. However, data of some government departments and private companies are mainly circulated and used internally which may hinder smart city development. Open data law may thus be necessary to mandate the government and even certain private sector companies have to share their non-sensitive and anonymous data for smart city initiatives. It is with a more facilitating role of the government that the city can make the most of the immense opportunities in this digital era.

The Challenge on Mindsets and Education

One core feature of smart city is: "people-centric", citizens are set to play an increasingly important role in Hong Kong's smart city development. However, some citizens' readiness to participate in smart city initiatives is rather low. Rigidity is deeply rooted in the mindsets of some professionals, businesses, and the general public. As mentioned, some people hold the assumption that elderlies have limited knowledge and competency in using new technologies. Contrastingly, they are digitally competent. With user-friendly technological devices like smartphones, elderlies could easily navigate the functions to serve their needs after some basic training. Elderlies are more than prepared for digital transformation and what we need is incentives for them to try out new technologies. However, misconceptions surrounding smart technology use by seniors may obstruct the progress of building a smart city. Also, some people don't have a favorable opinion of smart technologies because of privacy concerns. Some citizens are worried about the loss of privacy because of the data collection process. This fear and uncertainty in turn lower citizens' acceptance and involvement in smart city-related activities.

It is imperative to improve citizens' readiness in smart city initiatives by building trust and easing misconceptions. Peoples' awareness and acceptance to new technologies play a critical role in accelerating smart city development since technological innovations and applications are often user-driven. One of the effective ways is to change people's mindset through education. And the problem of privacy concerns can be tackled by promotion and publicity. It is important for us to create a sense of trust between the public and the data platforms, for data traffic to be maximized. The government has to be more outspoken about the privacy and cybersecurity safeguard of digital platforms. The regulatory regime of the future smart city should also be one that ensures minimal information would be retained by digital platforms. Concerns over data privacy can only be fully addressed in cooperation. It is when more citizens are ready and capable of utilizing ICT services that smart development can be achieved.

New Impetus to Digital Transformation in Hong Kong

Looking ahead, apart from looking back at our past efforts, it is crucial to look into the future and make the most out of the opportunities ahead of us. It is believed that the COVID-19 pandemic is an important catalyst for digital transformation in Hong Kong, and the new national development initiatives could further provide the city with a favourable circumstance to make good use of

smart technologies to consolidate our competitive edges.

Digital Transformation in the Post-COVID Era

The COVID-19 pandemic has, for almost three years now, shaken the world, shattering so much of what we had long taken for granted in our cities, presenting exceptional challenges to authorities around the world, including Hong Kong. Nevertheless, this particular pandemic has unintentionally expedited the development of smart cities. One such promising development is the application of digital technology to fight the pandemic. It is pleased to note that the government developed an Interactive Map Dashboard ("the Dashboard") named "Coronavirus Disease in HK" in collaboration with the community. Developed by experts of geographic information systems (GIS), the Dashboard facilitated the effective dissemination and exchange of pandemic-related information. The interactive map Dashboard displays spatial statistics like buildings with confirmed cases, and the transports taken by confirmed patients 14 days before their symptoms could be noticed. Other important real-time data, such as the number of daily confirmed cases and detailed breakdown in terms of age and gender were also made available to the public and researchers. Big data analysis helps policymakers and researchers to understand issues and devise solutions more accurately. The effective dissemination of information could enhance data transparency and help allay public concerns and pacify their mood. This serves as a successful example of public-private partnership (PPP) and the model can be exported internationally.

Even for us as citizens, alongside mask wearing and social distancing, innovation and technology have also become part of our daily routine. Education institutions are now adopting online teaching mode to achieve "suspending classes without suspending learning" during the outbreak. Public and private sectors are adopting remote offices, and many meetings have moved online. E-commerce is also a significant turn point for new consumption patterns in the digital era. Literally every industry, every person, is adapting to the digital world. The time for digital transformation has come and there are abundant encouraging signs that we are ready to embrace new development opportunities.

Integration into the National Development

Apart from COVID, new national development initiatives have provided Hong Kong with tremendous economic opportunities. The Guangdong-Hong Kong-Macao Greater Bay Area ("Greater Bay Area") can elevate Hong Kong and the region's competitive advantages especially in ICT. Hong Kong must seize these opportunities and capitalize on its smart city development to unleash its full potential. The GBA smart city cluster encompasses nine cities in southern China with a population of 86 million and a GDP worth about US$1.7 trillion in 2020. Yet, within GBA there are three sets of legal and administrative systems, as well as different tax regimes, thus impeding the free flow of people, goods, capital and information, leading to difficulties for deep integration. Against these challenges, Hong Kong's unique systemic strengths under "One Country, Two Systems" allow us to break these barriers and render the GBA plan economically efficient. Only when we make smart cities and ICT development a functional economic chain can we truly achieve sustainable smart city development. During such process, Hong Kong's potential contributions to the GBA cannot be underestimated:

First of all, Hong Kong is an ideal testbed to experiment on different cross-border collaboration models for ICT developments. Hong Kong naturally attracts talents all over the world with its free flow of the factors of production, a free market that encourages innovation, and the proximity to the world's second largest economy. There are calls for the governments of Hong Kong, Macau and Guangdong to experiment on building an ICT aisle and information platforms as well as the testing of new collaboration models between the academia, industry, and the government. If these collaboration models are proven to be effective, they could be shared around the world to help global investors tap in the opportunities brought by the GBA.

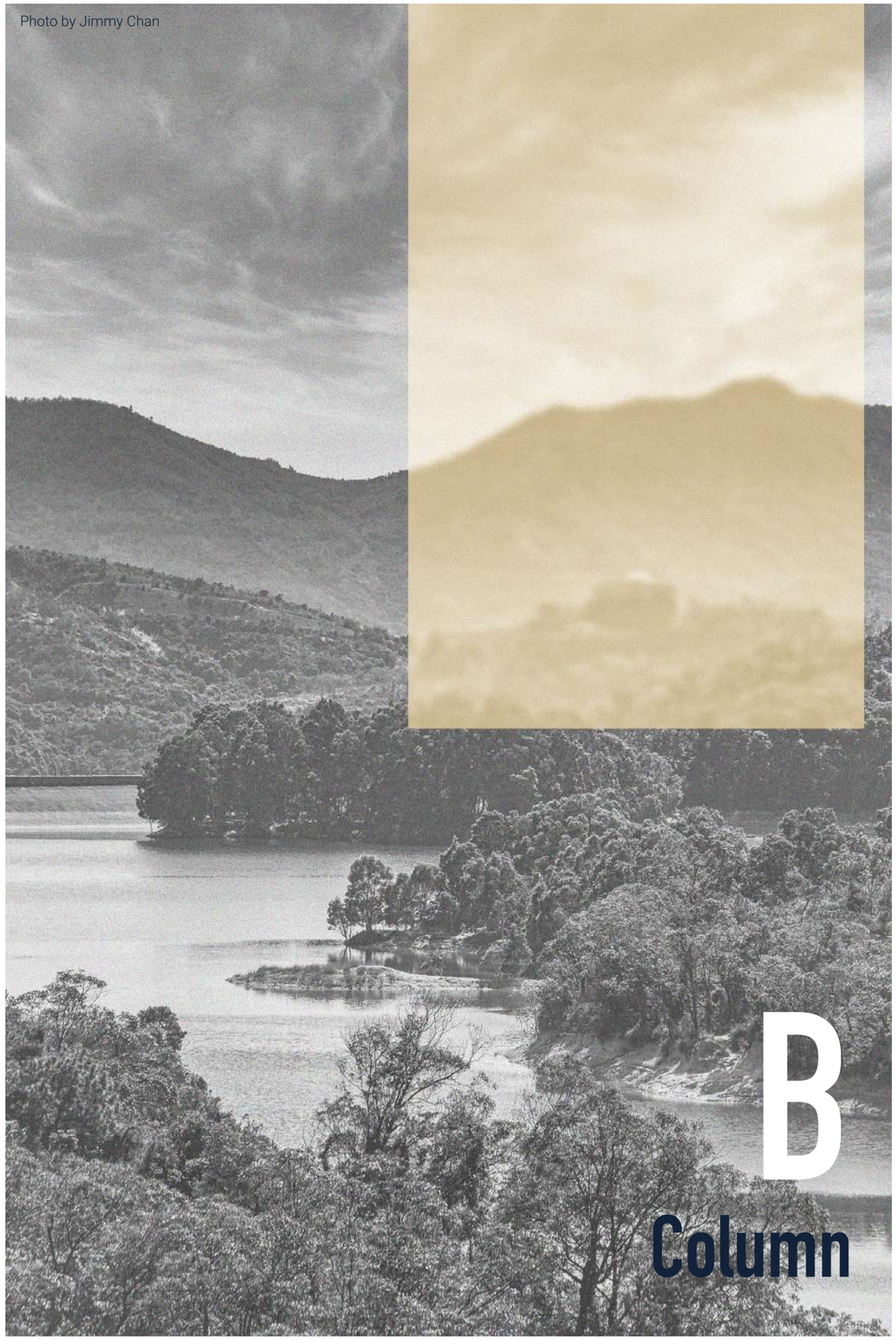
Besides, Hong Kong's producer and professional services can make use of smart digital platforms to export services internationally. Hong Kong possesses a pool of high-quality professional talents with strong business acumen which is capable of addressing the demand for international professional services, ranging from legal, accounting, architectural to many other services. Take the legal sector as an example, some pioneering practitioners and technology experts are benefiting from the use of online dispute resolution services developed locally to export services to APEC economies under the idea of "law-tech". Smart city development in Hong Kong can allow even more practitioners to follow their footsteps. As such, Hong Kong can act as a pioneer and springboard to the GBA to "go global".

Planners' Foresight is Central in Driving Hong Kong's Digital Transformation

In the quest for Hong Kong to become a smart city, planners' vision and pragmatism are critical. Imagine the future of smart transportation. Autonomous vehicles will need to communicate with other vehicles, passengers in the vehicles, and the road instantly. These vehicles will have to learn to make decisions on their own based not only on internal sensors, but a road system

designed by planners and engineers. Similarly, car-parking facilities at homes and workplaces may become less demanded in future, as people can use their smartphone to request a driverless car at any time of the day. Any other time, these vehicles can be returned to a central complex to wait for calls. This example is just a few of the aspects that a smart city will redefine. The digital transformation trend is unstoppable, and planners' forward-looking endeavor in making Hong Kong a successful smart city is extremely vital.

In conclusion, smart city development is extremely vital to Hong Kong as a global city and as a home. While there are challenges on funding, policy and regulation and citizens' readiness, as I have demonstrated, there are things that the government could work on to address the situation. Looking forward, the COVID-19 pandemic and new national development initiatives have presented immense opportunities for Hong Kong to truly develop into a world-class smart city. During the digital transformation, planners' foresight is critical.



COLUMN

Sustainable Urbanization – The Ecological Functions and Values of Fishponds Revisited

Jimmy C F Leung

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Introduction

The purpose of this short article is to examine the ecological implications of developing the Northern Metropolis (NM) as stated in the Chief Executive' 2021 Policy Address. The article will first provide an overview of ecological significance of the Mai Po Nature Reserve and the Inner Deep Bay wetland as a wetland of international and regional significance. Secondly, the development pressures built up in the fishponds in the Northwestern New Territories in the 1980s, 1990s and more recently the implementation of NM urgently called for sustainable urbanization in this part of the NT. The Study on the Ecological Value of Fish Ponds in the Deep Bay Area with its recommendations embedded into the statutory plans for the district. This may need to be changed in order that the NM can go ahead. The key issues that need to be sorted out will be outlined. Lastly, a case study of a residential cum wetland development, the first of its kind approved for development in an ecologically sensitive area in Hong Kong, is chosen to illustrate how the statutory plan helps provide a framework to guide the development.

Black-faced spoonbills in Mai Po. The global population of the bird has risen to more than 4,000 from just 1,000 20 years ago. Photo: May Tse

Iconic species to shed endangered status

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One of Hong Kong's most iconic migratory birds could be removed from a list of endangered animals in two years, after decades-long conservation efforts, an environmentalist group has said.

The global population of the black-faced spoonbill has reached an all-time high of more than 4,000 birds, fourfold that 1,000 recorded 20 years ago.

In an international survey in early January, conservationists and ornithologists catalogued about 6,192 birds across East Asia, including Japan, South Korea and Malaysia.

The species of migratory waterbird, currently classified as endangered, plays an important role in Hong Kong's conservation efforts, serving as an indicator of the health of local wetlands.

The waterbird is also a mascot of the World Wide Fund for Nature Hong Kong, which manages the Mai Po nature reserve.

The Hong Kong Bird Watching Society (HKBWS) attributed the wading bird's robust population growth to Taiwan's vast area of fish ponds that created important feeding grounds.

According to the wildlife survey, 3,304 birds had selected the island as their wintering grounds, a 22 per cent increase from last year and accounting for nearly two-thirds of the species' population.

"Its extinction crisis is decreasing year by year," said Yu Yat-tung, the HKBWS director. "I was really down to the increase in Taiwan."

Over the past eight years, about 370 animals have chosen Hong Kong as their winter habitat, with 169 birds reportedly staying in Deep Bay in the New Territories this year, a 16 per cent rise from 2021.

The mangrove forests, wetlands and fish ponds around the Mai Po nature reserve had created an "ideal" habitat for the birds, Kong Yu said.

Yu said that the government's move to establish wetland parks as part of its Northern Metropolis plan might have a "proactive" effect on the city's conservation efforts, but he warned that authorities must ensure conservation measures extensive enough to reduce human disturbance.

Under the Northern Metropolis blueprint, authorities have suggested recovering about 700 hectares of privately owned wetlands and fish ponds near the border to set up three new wetland parks covering 3,000 hectares.

But Yu said Mai Po saw a 14 per cent decrease in the birds from 45 to 22 this winter, saying the casino and hotel industry could be the cause.

Discussions about taking the animal off the endangered species list first started in 2016 by the International Union for Conservation of Nature, an entity under the United Nations. Yu said, adding that the process could take five years to complete.

It was unclear, he said, whether the black-faced spoonbill would be downgraded from "endangered" to "vulnerable" or "near threatened," which means it faces a lower risk of extinction.

Figure 1 Source: South China Morning Post, 22 April 2022

On 22 April, 2022, the SCMP published an eye-catching article entitled Iconic species to shed endangered status with a photo of the black-faced spoon-bills. The article conveyed rightly or wrongly a few key messages. Active conservation

Wetlands and their ecological service value

[Table 1
General categories of wetland values at three different ecological scales (from Mitsch and Gosselink, 2000)

Ecological scale	Value
Population	Animals harvested for pelts
	Waterfowl and other birds
	Fish and shellfish
	Timber and other vegetation harvest
	Endangered/threatened species
Ecosystem	Flood mitigation
	Storm abatement
	Aquifer recharge
	Water quality improvement
	Aesthetics
	Subsistence use
Biosphere	Nitrogen cycle
	Sulfur cycle
	Carbon cycle
	Phosphorus cycle

Source: Reference 7, p. 29

Figure 2 Source: Hanson and others (2008) p.29

can prevent extinction of species of birds. This is in fact plenty of evidence in China, Hong Kong and elsewhere in the world[1].

However, the article seems to imply that providing a foraging and feeding ground for migratory waterbirds is the primary funtion of reserving the wetland system. Wetlands are beneficial to human in many ways as indicated in Table 1 below Wetlands and their ecological service value.

Mai Po Nature Reserve and Inner Deep Bay Wetland

The Mai Po Inner Deep Bay wetland site (米埔內后海灣濕地) is a sanctuary for local water birds and migratory birds at the Northwestern New Territories. Covering 15 sq. km. of wetland, it has, since 1995, been listed as a wetland site under the Ramsar Convention (拉姆薩爾公約), which is an inter-governmental treaty that embodies commitments of its member countries to maintain ecological character of wetlands of international importance.

The wetlands comprising gei wais ((基圍) shrimp ponds), freshwater ponds, inter-tidal mudflats, mangroves, reed beds and fishponds act as a key way station and wintering site along the East Asian-Australasian Flyway where 50 million migratory water birds travel through each year.

Since 1983, WWFHK, a non-governmental agency has been managing the 380-hectare Mai Po Nature Reserve within the Inner Deep Bay. Classified as a Biodiversity Management Zone under the Mai Po and Inner Deep Bay Ramsar Site Management Plan, the Mai Po Nature Reserve provides sanctuary to wildlife and benefits the local community through education, recreation and conservation.

Preparation of Statutory Plan for the Mai Po and Fairview Park

The first statutory plan prepared for the area known as Mai Po and Fairview Park where the Mai Po Nature Reserve is located is the Interim Development Permission Area Plan. It was one of the first statutory plans prepared to regulate development in the rural areas of the New Territories under the Town Planning Amendment Ordinance in 1991. A year later in July 1991, the IDPA Plan was replaced by the DPA Plan which in turn was replaced by an OZP in June 1994.

The current version of the statutory plan covering the area is the Mai Po & Fairview Park Outline Zoning Plan S/YL-MP/6 approved by the Chief Executive in Council in February 2005.

Development pressure in the area has increased considerably in the 1980s and 1990s. From 1990 to 1997, planning applications for 19 sites involving mainly low-density housing with recreational activities such as golf courses and amenity areas were submitted to the TPB. In considering these applications, one of the major issues is whether fishponds surrounding the Mai Po Nature Reserve have any intrinsic ecological value. There was insufficient evidence to establish the ecological value of fishponds conclusively, thus making it difficult to determine whether the replacement of fishponds by low-density housing with uses like nature reserve and re-created habitats would be alternative beneficial uses.

In 1995, the Planning Department commissioned a study to assess the ecological value of fishponds in the Deep Bay Area based on scientific data. The study involved a full four-season ecological survey covering the Mai Po and Inner Deep Bay Wetland including the Mai Po Nature Reserve, the surrounding fishponds and the adjacent inter-tidal mudflats south of the Shenzhen River.

The Study found out that, “traditionally the stocking of fishponds with fish fingerlings occurs between February and April with the harvesting of fishponds usually occurring between October and March… More recently, some farmers have changed their practices to continuous/multiple stocking and harvesting in order to achieve quicker cash returns… Harvesting involves gradual drainage of a pond by pumping water into the surrounding

1 Please refer to Nature Conservation Management Agreement Proposal – Nature Conservation Management for Long Valley 2012 -2015 https://www.ecf.gov.hk/doc/ECF_Paper_22_2011-12.pdf and the Wo Sang Wai case study

ponds. This increases the density of the fish in the pond and enables their collection. Once the commercial fish have been harvested, the remaining small fish or invertebrates (known as 'trash' fish) are available for bird feeding. This aspect of fish pond operations is significant in terms of the ecological functioning of the fishponds, as many bird species feed on this trash fish supply."[2] In other words, fish ponds in Deep Bay area have intrinsic value as they function ecologically as a substantial source of food supply for the birds and as an important habitat for roosting and foraging of water birds.

While a scientific basis of the ecological value of fishponds has been established, the complex responses of birds to future land use changes and carrying capacity is still not fully understood. The study therefore recommended the continued use of the precautionary approach in land use planning in the area and the concept of "no net loss of wetland" is recommended for adoption under the precautionary approach.

The statutory plan was subsequently amended with two zones namely, "Other Specified Use (Comprehensive Development to include Wetland Restoration Area)" (OU(CDWRA)) and "Other Specified Use (Comprehensive Development to include Wetland Protection Area)" (OU(CDWPA). The planning intention of "OU(CDWRA)" is to provide incentive to restore degraded wetlands and adjoining fishponds and to encourage phasing out open storage and port back-up uses on degraded wetlands through comprehensive residential and/or recreational development to include wetland restoration area. The planning intention of the "(OU(CDWPA)" is to allow comprehensive low-density residential development or redevelopment provided that the existing continuous and contagious fishponds within the zone are protected and conserved. In line with the no net loss of wetland, development or redevelopment should involve no pond filling and no decline in the wetland function of the fishponds. Any new development should be located on land already formed and far away from the existing fishponds within the development site.

The operation of the fishponds is, in economic terms, a positive externality in that they contribute to the wetland ecosystem. For negative externality like pollution arising from industrial production where the polluters pay principle prevails, should there be subsidies/ incentives for the fishpond operators? In Hong Kong, the issue of food security does not seem to be high on the agenda of government. Fishponds and for that matter farmland would provide locals with supply of fresh water fish and fresh vegetables without enlarging our carbon footprint by importing them from outside Hong Kong. The COVID-19 pandemic shows that the supply chain can be seriously disrupted leading to reducing supplies and rising prices of food. It is always the lower income families that suffer. Both farming and fishpond industries faced their own problems, which are subjects of separate studies. The government can play a role to assist them like providing technical assistance, facilitating their operation through new technologies and coordinating the harvest times of fishponds to ensure there will be ponds with low water level at any one time, etc. during the migratory waterbirds can find foraging and feeding grounds. This raises the issue whether the fishponds should be resumed and developed for conservation purposes and paying NGOs millions of dollars annually to do the same, if they are already performing such functions. The involvement of the public sector has the effect of crowding out this sector. What really is needed is coordination of fishpond operators in phasing their harvest time.

It is clear that there will be few development options that do not have adverse impacts on the environment in the future. The Hong Kong 2030+ Study has pledged to take sustainable development as an overarching goal. Most brownfield sites have been earmarked or under investigation for development. In order that an evidence-based approach can be adopted in selecting the development of options that a strategic plan should provide, the first major task of the implementation of NM is to study the value of the wetland so that a meaningful comparison can be made with other options, for example, fringes of country park. Questions like what are Hong Kong's obligations on Mai Po wetland system under the RAMZAR Convention? What is the appropriate amount of wetlands or fishponds that should be preserved in the area so as to maintain its integrity? How to prevent fragmentation of wetlands? Does government still adhere to the principle of no net loss of wetland, thus preferring wetland for compensation and that no other alternatives like woodland, farmland (ensuring farmland is used for agriculture purposes) are acceptable? Does the government prefer on-site or off-site compensation? To what extent the public is prepared to pay for the development of Northern Metropolis vis-à-vis other options? It would be difficult for stakeholders and members of the public to give their views without information like the overall costs and benefits of different options. The concerned

2 Executive Summary – Study on the Ecological Value of Fish Ponds in the Deep Bay Area, p.2-3

government departments and NGOs operating in the area are best positioned to conduct such a study as they have the experience and local knowledge and information (time-series data) of not just on Mai Po Nature Reserve but also the Hong Kong Wetland Park, as well as numerous ecological impact assessments required under the EIAO for development projects in the vicinity. In this connection, the operators of compensation wetlands should be required to submit an annual report in future on what has been achieved such that time series data can be accumulated for finetuning policies and measures on preserving wetlands in the future. In view of the impact of implementation of the Northern Metropolis on the Mai Po wetland system, it is considered opportune for the Environmental Bureau to consider introducing the concept of "Biodiversity Net Gains" as a development control measure.

Apart from the statutory plan, the TPB also publish planning guidelines for applications in the Mai Po area, namely the Town Planning Board Guidelines for applications for developments within Deep Bay Area under section 16 of the Town Planning Ordinance the latest version of which was promulgated in 2014[3]. The purpose is to facilitate applications for different uses and developments in the area. Wetland Protection Area (WCA) and Wetland Buffer Area (WBA) are designated. Within the WBA, degraded areas are allowed an appropriated level of residential and recreational development so as to provide an incentive to remove the open storage use and to restore some of the fish ponds that were lost.

A Case Study of Wo Sang Wai Development

Wo Sang Wai is one of the three target areas identified in the statutory plan where removal of nuisance uses such as open storage and container back-up uses should be phased out and the restoration of some lost wetland habitats be implemented through residential/ recreational development of an appropriate scale.

The Wo Sang Wai residential development is subject to procedures under the Town Planning Ordinance and the Environmental Impact Assessment Ordinance. Land was purchased by the developer in March 2005. As the site lies within the Deep Bay Buffer Zone 2 and with an area of over 20 ha which is considered as a designated project, an environmental permit is required for the development under the Environmental Impact Assessment Ordinance.

3 Town Planning Board, Town Planning Board Guidelines for applications for developments within Deep Bay Area under section 16 of the Town Planning Ordinance, TPB PG-NO. 12C (Revised May 2014), 2014

The developer submitted a project profile[4] which set out the important environmental factors to be considered. In September 2005, a study brief[5] which defined the scope of the EIA encompassing all technical assessment of air quality, waste, ecology, fisheries and cultural heritage aspects was issued by the Director of Environmental Protection. A key focus is on the short- and long-term arrangements for the management and maintenance of the proposed wetland restoration area particularly the financial arrangements.

The project proponent (i.e., the developer) was committed to the continuous public involvement process so that the implementation of the project can be facilitated. Informal consultation with major green groups and local residents were carried out. An area of 4.74 ha of wetland habitat is to be provided in line with the "no net loss of wetland" principle outlined in the Town Planning Guidelines 12B for sites within the wetland buffer area. The EIA report was subsequently approved with conditions by the Director of Environmental Protection in July 2008[6].

Three planning permissions have been granted, namely A/YL-MP/166, A/YL-MP/185 and A/YL-MP/229, by the RNTPC of the TPB on 19.9.2008, 21.10.2011 and 27.2.2015 respectively. There are minor variations in the site area, number of residential units, building height, open space, parking spaces and layout etc. in these planning applications.

The latest application A/YL-MP/229 involving a residential development of 400 units of 3 to 4 stories with a total gross floor area of 82,963 sq. m equivalent to a plot ratio of 0.4. (See Figure 3 Layout of Development) The development will include a wetland restoration area of 4.74 ha to compensate the loss of 4.69 ha of wetland habitat comprising seasonal marsh and freshwater marsh and reed bed at the development site. Under the Environmental Permit, the wetland will have to be established prior to the commencement of housing development part. The man-made wetland is made up of four rain-fed freshwater ponds established in 2010. The ponds were fringed with transplanted reeds and grassy vegetation. Two gravel islands and two vegetated islands are created. Some 108 species of bird including the Black-faced Spoonbill as well as dragonflies, damselflies, reptiles and amphibians have been

4 Proposed Comprehensive Development at Wo Shang Wai Yuen Long, Project Profile, July 2005 http://www.epd.gov.hk/eia/register/profile/latest/esb131.pdf
5 Proposed Comprehensive Development at Wo Shang Wai Yuen Long, Environmental Impact Assessment Study Brief No. ESB 131/2005 http://www.epd.gov.hk/eia/register/study/latest/figure/esb-131.htm
6 Proposed Comprehensive Development at Wo Shang Wai, Yuen Long, Environmental Impact Assessment Report, March 2008 http://www.epd.gov.hk/eia/register/report/eiareport/eia_1442008/eia_144.pdf

observed. The wetland has provided a breeding ground for water birds and a sanctuary for wintering shorebirds. The developer will be responsible for the construction of wetland restoration area and will undertake to manage it until a successor can be found to the satisfaction of the Environmental Protection Department.

Conclusion

This article has demonstrated that the developments on land without ecological value can be accommodated within wetland protection area as long as they can enhance ecosystem functions of the wetland. The OZP was revised taking account of findings of the fishpond study, which establishes scientific evidence that fishponds are ecologically importance so that different stakeholders like green group, developers and landowners are convinced that they are worthy of preservation. The preparation of the statutory plan provides a platform for different stakeholders to express their views and reach a broad consensus.

The case study of Wo Sang Wai residential development, the first of its kind in the Mai Po area and indeed in Hong Kong demonstrates that the Environmental Impact Assessment Ordinance also plays a very essential role in ensuring the development meets with requirements particularly in the long-term management of the wetland created under the proposal. However, there is much scope to improve the efficiency of development. While the wetland restoration area was completed in 2010, construction of the residential units has yet to commence, 12 years after the land was purchased and the development process initiated. It is understandable that in this unprecedented case, there are many issues like the definition of wetland, management and financing of the wetland restoration area, etc. have to be sorted out between the developer and the concerned authorities. This is surely a case that merits a detailed study upon completion of the residential part of the development such that the experiences gained can facilitate future similar applications.

Overall, this is a win-win case as a restoration wetland area of 4.74 ha has been created on reclaimed land previously used for open storage and at the same time much needed housing units will be produced for the community. It also demonstrated that actively managed wetland is achievable under the local context.

One issue that comes out of the case study is how to streamline the development process such the planned land uses can be implemented quickly to relieve the demand.

As far as the implementation of NM is concerned, a fundamental question is posed: is it really wise to spend millions of dollars to resume fishponds while their benefits are already provided by the fishpond operators free of charge (positive externality). It is also necessary to spend a few more millions of dollars to operate the fishponds annually by NGOs. Why don't we assist the fish farmers to breed higher value fresh water fish, co-ordinate their harvest time such that drained fishponds are available on a continuous basis.

More importantly, the paper raises the issue of food security. The pandemic has clearly demonstrated that food supply chain can be seriously disrupted, not to mention the hike in prices. Ultimately, it is those poor families (urban and rural) who suffer. More importantly, if fish farmers are encouraged to operate their fishponds effectively. A good and steady supply of local fresh water fish will reduce our carbon footprint of having them imported from the Mainland or elsewhere. Local employment opportunities are created. The same is applicable to the vegetable farming. In 2015, only 1.82% of vegetables were supplied locally, compared to the hey days of 30-50% self-sufficiency rate in the 1980s[7].

The following two tables Table 2 and 3 show how much land (Lau , 2013, p. 145) and labour (ibid, p.147) are required to reach a certain level of vegetable self-sufficiency :

Urban farms in Singapore and Taipei that the author visited over the last 5 to 8 years demonstrated that there is a circular local economy in that coffee waste from local coffee shops are saved and passed onto urban farmers free of charge to mix with their compost to reduce the highly offensive odour. The sense of reducing and recycling waste and

7 Please refer to https://hkfoodworks.com/research/food-supply/

Target VSS(%)	10%	20%	30%	33.7%
Jobs created as farmers	7,199	16,497	25,796	29,236

Table 2 Targets of vegetable self-sufficiency and farmland required in hectares

Target VSS(%)	10%	20%	30%	33.7%
Jobs created as farmers	7,199	16,497	25,796	29,236

Table 3 Estimation on jobs created as farmers under different level of VSS targets

sense of community are strengthened.

Acknowledgement

The author is grateful for the information provided by and discussions on the Wo Sang Wai development with Mr. Shuki Leung, Senior Deputy Manager of Henderson Land Development Company Limited. All faults that remain are however that of the author.

The author is also grateful for the comments of his former colleagues Mr. T.K. Lee and Ms. Iris Tam. Last but not least the author would like to acknowledge the very useful discussion he had with Mr. Lau Hoi Lung on fish farming and agriculture in Hong Kong and more importantly, for his inspiring M. Phil. thesis on "Evolution of Urban Agriculture in Hong Kong: stepping towards multi-functionality". This is a "must-read" for anyone interested in urban agriculture in Hong Kong.

Dedication

The author would like to dedicate this paper to the memory of Dr. Lewellyn Young, who passed away in 2019, for his contributions to the Mai Po and Inner Deep Bay wetland system as well as the East Asian-Australasian Flyway.

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COLUMN

What's New to Us?

Andrew Lam

Mr. Andrew Lam is a veteran town planner involved deeply in professional research and education in parallel with his practice. His professional footprint covers a wide range of projects of various scale and nature, from all over China and Asia to the Middle East and many places else.

According to I-Ching, every 180 years is a Grand Cycle that points to restart and recurrence. Hong Kong was turned into a city and made known to the world 180 years ago. The Territory was extended up north in 1860 and subsequently in 1898 with the term New Territories first introduced, and thereafter, the southern part of the New Territories was rebranded as New Kowloon in 1937 to make space for urban expansion. Many new towns emerged in New Kowloon and in the New Territories in the second half of the last century, and then come the various New Development Areas in the past decade. Recently, evolving from the flesh and bone of what were new in the past, the new visions of Lantau Tomorrow and Northern Metropolis are taking shape.

From the angle of spatial planning, almost every corner within our some 2750 square kilometres territory has been studied though not fully exploited. For those areas left untouched, it is a matter of choice rather than oversight, we should not have missed any strategic development opportunity within the box so far.

We have been planning within our administrative boundary and have made almost no reference to what is happening over the other side of Shenzhen River until quite recently. The "Frontier Closed Area" had been used to cut the Territory off from the Mainland for over half a century, and in result confining our vision to a severely inward looking telescope. The planning and development of "cross-border" transport infrastructure projects a crystal clear picture on the issue. After the opening of the Kowloon-Canton Railway in 1910 and before the opening of the Hong Kong-Shenzhen Western Corridor in 2007, the other land-based crossings built in between the hundred-year period did not provide any means for through traffic but merely border control points for passengers and goods.

Our strategic planning turned a blind eye to the mushrooming economic activities in Shenzhen and beyond since the 1980s. Many opportunities have been wasted in setting our agenda for facilitating the development of the greater region, or what we now called the Greater Bay Area, for the benefits of addressing some of our spatial problems as well as building a much more powerful economic state together with our neighbours. Yet, the pie is still growing bigger and new offers from the Central People's Government have been casted in the iron-strong 14th Five-Year Plan.

The New Territories has been serving as our land bank for over 120 years and has been sporadically urbanised. In response to the changing regional development context and the call for closer regional integration from the Central People's Government, we are left with little but clear choice on how to embrace the "new opportunities".

Over the years, the line between "rural" and "urban" is extremely blurred in the absence of "rural" planning. In spite of the already highly compromised "rural landscape" in the largely developed New Territories, it is time for us to admit that while the aspirations for conservation is high, it cannot be equated to desire for keeping the rural setting in general. Hong Kong is "One" territory, and should no longer be split into two at strategic planning level. Conservation of our quality natural setting is a must and should be interpreted within the context of the relevant environmental quality instead of a historic term which has lost its meaning as well as function.

It is high time to comprehensively review our standards and guidelines in view of the new strategic context. Yet, even with all the "new" land development opportunities pumped into the pipeline and the production capacity could be sped up, are we sure what we are going to bake out of the flour in stock?

Land, be it in the north or south, is not merely for housing or for plenishing our treasury, it must be for the active promotion of our social and economic development. Yes, "active". If there is anything new, it should be the change in our mindset from "passive" to "active" mode.

Given the clear roles set in the 14th Five-Year Plan for Hong Kong, we should fully utilise the upcoming development opportunities to restructure our economy and social spatial reorganisation through action-oriented planning. There are opportunities for decentralising our employment base and population density in order to establish a more balanced spatial structure; there are opportunities for adopting new design standards for building a new era smart city showcase; there are opportunities for the application of more effective planning tools which tie land use zoning with policy incentives together to direct and facilitate investment; there are opportunities for developing cutting edge ecologically friendly development model and building design; and there are opportunities for shaping a more permeable boundary to facilitate freer flow of talent, goods, capital and information.

"One Country, Two Systems" is not defined by tight border control but the uniqueness of Hong Kong's system. If the European Union, which has twenty-seven member states, can maintain a free border to facilitate common good, it is hard to imagine why the Greater Bay Area cannot be developed as a show-case region for fully utilising the advantage and potential of Two Systems for the benefit of One Country. Attempts for setting new standards and governance structures in mind of the market potential of the ASEAN countries and those along the Belt and Road are necessary, and the associated infrastructures required to support the enhancement of the GBA for serving and strengthening such role should be put in place as soon as possible.

In view of the global and regional sociology-economic picture, we can expect drastic and rapid changes in the coming years. Incremental improvements might have served us well at time of "peace" but could hardly be rely upon when facing Black Swan or Grey Rhino. Strategic planning build upon those scenarios will not just put Hong Kong under protection but possibly for another leap forward given the new opportunities emerged.

COLUMN

Northern Metropolis – What it Can be and What it Should Not be

Kenneth To

Kenneth is a Fellow of the Hong Kong Institute of Planners with over 30 years planning experience in Hong Kong and Mainland China. He can be contacted via kennethto@ktaplanning.com

Part 1 – The new town blue : achievements and limitations

One evening in the mid-2010's in the HKIP office, the PAC as usual had discussion on its responses after government presentations on one of its Planning and Engineering Studies – I can't remember it was FLN/KTN or HSK or NTN or…. Refraining from displacement impacts on marginal/rural activities due to NDAs, which had been hot and controversial, members' discussion on the layout and design of the NDA was lukewarm, if not showing total indifference.

Indeed Hong Kong had been doing similar "New Towns", with all the good or bad variations for nearly half a century, housing millions. Moving town parks or district shopping centres or transport interchanges around, looking for novel design of such facilities, place –making receipes and the like --- did allow some talking points. But these were not most interesting topics to everyone. Job creating land use was most welcomed but everyone knew it was going against the market and therefore going to be challenging, to say the least.

Then one PAC member pointed at the plans on the screen and said "by filling in the gaps with more NDAs, they are all linked together – the NDAs and the current New Towns together forms a massive urban region stretching across NT North. We can't treat them as individual Areas or Towns. It is a City in its own right with some two million population!."

Our mass transit station-town centre formula had been tried out with numerous successes well before the term "TOD" became popular in academic and professional literature. Our new towns are connected back to metropolitan Victoria via mass transit lines, a best example of the "palm-fingers" model against urban sprawling. Each new town with its 300,000 to 500,000+ population is well-served by a full list of "district level" facilities. Mass transit provides convenient though sometimes congested links to jobs and higher order metropolitan amenities in the main city centre.

So what should happen when these fingers are

merging into “a City of its own right”? i.e. what we now call “the Northern Metropolis” (NM)? A new paradigm of urban expansion for Hong Kong?

Part 2 – The whole bigger than sum of parts – but what is the whole?

To many people the term Northern Metropolis gave them the impression that all those in-between areas will, given time, be filled up by buildings and infrastructures. Those dreaming of selling their idle farmland will love it; while “greenies”, whichever versions of the term, take it as nightmares. This impression, hopefully, is not the official meaning of NM.

According to planners’ imagination, NM cannot just be a bigger cluster of more NDAs/New Towns, sandwiched between and being sub-ordinated to and dwarfed under the constant gravity of the metropolitan areas of Victoria to the south over the Tai Mo Shan land mass, and Shenzhen to the north across Shenzhen River. No doubt the government document has rightly emphasized NM will have its own economic driving forces. On top of that, what else will make NM a City in its own right?

Many people have pointed out the difficulties to encourage businesses to move to a new decentralized location. Some said government offices should take the lead. Indeed should NM have an administration centre where regional offices of government departments/public agencies are to be clustered? (For instance, not a single person of Planning Department is now located within the geographical boundary of NM which straddles three DPOs.) If the answer is yes, where should it be located? Somewhere conveniently connected to different parts of NM on one hand, and back to Metropolitan Hong Kong on the other?

Similar questions will be asked of other higher level services. It has been hinted that up-coming hospital projects in NM (newly planned or upgrading of existing one(s)) will be more than district level facilities. What will be the overall hierarchy of medical services, so that patients will not be rushed back south to one of the bigger hospitals? There is no existing or planned major tertiary education institution within NM. Does this help to push forth the economic driving forces? Are we going to have a brand-new university, or one of the major local universities should set up a satellite campus here? Likewise, the existing and planned cultural facilities in New Towns and NDAs of NM are humble district venues. Is it a reasonable expectation to have a major civic centre for NM, with multiple quality venues for staging of cultural performance or sports events? The location of such “city-wide” facilities relative to the different existing/planned development nodes spreading across NM is sensitive. Will the long-awaited NOL be adequate to integrate NM or do we need even more and better east –west connections forming a real network?

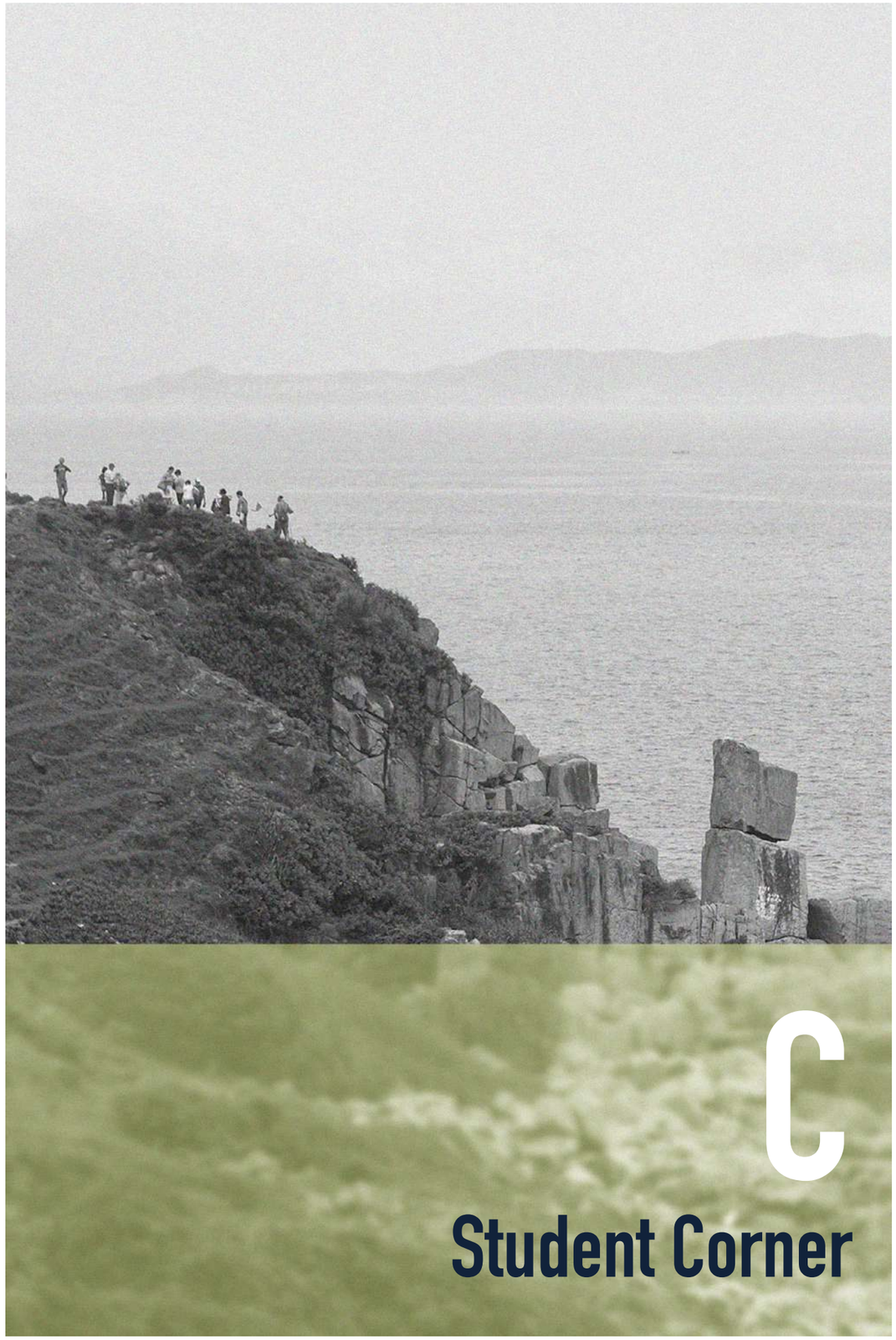
Part 3 – Endowment, Heritage or Obstacles?

The dream list can go on and on, as if we are drawing a city on a blank canvas. But this is certainly not the case. Within that oval bubble to be known as NM, there are the oldest villages and clans in the SAR dated back at least to the Ming Dynasty; later settlements, so happened to be labelled non-indigenous due to the “colonial” cut-off date; hundreds of thousands “New Town” population many of whom are second generation new town-born and starting their own families here; and not to forget the small in number but resilient and diverse farming communities who are demonstrating the possibility of alternatives. Even the presence of the so-called brown field operators cannot be simply brushed under the carpet . These will all be the hosts of the NM to come. They are the indigenous residents forming the base line. Planners should gain their support/participation/ownership in drawing up the dream list in a future City where they can each find their own place.

“No-go” areas proliferate NM. Wet-lands, Country Parks and other green reserves scatter around. Instead of thinking of these as obstacles to development, let’s take, for example, the RAMSAR Site of Inner Deep Bay and Mai Po Nature Reserve claiming a highest international status as a most important asset, an endowment to NM, which should be treasured and strengthened as an integral part of the new City. Together with other green reserves such as Long Valley, agricultural parks etc., these will give a defining character to a sustainable city of the twenty first century.

Epilogue

Nowadays, cities are being branded and marketed as commodities so that they can survive global competition. Textbooks, however, told stories about unsuccessful cities having been planned out of nowhere. With the NM concept, are we looking forward to the integration of New Towns and NDAs into a City, with a full range of strengthened urban functions, having a strong character and identity based on its natural and social/cultural endowments, being capable of interacting with neighbouring urban centres on level grounds? Contrarily, will the notion of Northern Metropolis boil down to merely an exercise to grab more land to be designated as NDAs, to justify costly infrastructures for half-hearted satellite business/technology parks or more transport linkages to Shenzhen? Hopefully not the latter.



Student Corner

Student Corner

Camping, but not Tampering – Identifying Potential Campsites with Spatial Analysis to Avoid Excessive Camping in Hong Kong

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Alan Cheung, Gladys Lai, Lily Leung, Jenny Li, Sophine Tsang and Kenny Yiu have completed the Master of Science in Urban Analytics at the Department of Urban Planning and Design, the University of Hong Kong when this piece was written. The authors are composed of multidisciplinary professionals working in the public and private sectors, with Kenny, Gladys and Lily being land surveyors, Alan as a registered architect, Sophine as a GIS analyst and Jenny as a civil engineer.

1. Introduction

Hong Kong is an international metropolis providing prime financial, legal, trading, secretarial and consultation services to the world. Through urbanisation in the past decades, Hong Kong stands at the top tier of the world's economy, but meanwhile private dwellings, major infrastructure and development are fast destroying the natural parkland and beautiful outlying islands and rural areas for the public's enjoyment.

Triggered by the pandemic, overseas vacation becomes luxurious in terms of time and costs. All sorts of staycation as part of our daily life emerges for indoor and outdoor environments. Camping becomes one of the most popular

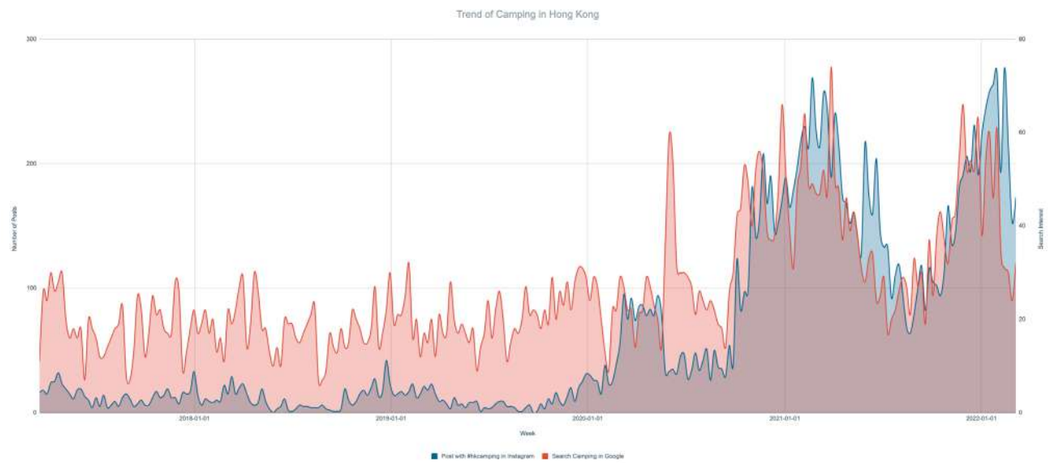

Figure 1.1 - Trend of Camping in Hong Kong (Source: Google and Instagram)

outdoor recreational activities since then. According to the big data from Google and Instagram (Figure 1.1), the attention about 'camping' has doubled since the pandemic reflecting the increase in the local demand for

Figure 1.2 - Photos showing Desertification (top) and Severe Hygienic and Pollution Problems in Tap Mun (bottom) (Source: Facebook Fans Page - Joy Cow 牛歡喜, 2022)Google and Instagram)

camping.

However, excessive human activities will destroy the ecosystem. Tap Mun (Grass Island) is an example. Camping tramples the grassland and causes biodiversity loss which in turn damages the ecosystem (Figure 1.2). On the flip side, most illegal campsites lack sanitary facilities which leave litters and used items behind and cause severe hygienic and pollution problems.

To achieve sustainable camping in Hong Kong, we went through different processes, including the contextual study, stakeholder engagement, case studies, site suitability analysis, and consolidation and recommendations with an implementation timeline, supplemented with a showcase. This paper summarized the last three key parts in our study.

2. Review of Planning and Licensing Processes

2.1 Overview

Campsites of Hong Kong can be broadly classified into two groups, namely the designated areas for campsites, and campsites on the private lands. The former is administered by the Agriculture, Fisheries and Conservation Department and the Leisure and Cultural Services Department. Their functions gazetted under relevant ordinances are regardless of zoning. Figure 2.1 is an overview of the legislation and types of land allocation for all government campsites.

The latter is managed by the non-government organizations (NGOs) or private operators, but normally a lengthy process is required to seek

Process	Legislation	Land Allocation
Agriculture, Fisheries and Conservation Department	• Designation areas for campsites under s.14 of Country Parks and Special Areas Regulations (Cap. 208A)	• No land allocation is required for 41 designated campsites within the Country Parks
Leisure and Cultural Services Department	• Designation of public pleasure grounds under s.106 of Public Health and Municipal Services Ordinance (Cap. 132)	• Require Permanent or Temporary Government Land Allocation (GLA) for 6 public pleasure grounds for campsites/lodges.
	• Permission of erecting tents in beach area under s.6 of Bathing Beaches Regulation (Cap. 132E)	• Same to the above.

Figure 2.1 - Overview of Legislation and Type of Land Allocation for Government Campsite

Process	Planning Application	Licensing Application
Legislations	Licensing	With Permanent Structures (e.g. glamping, caravan, lodges and ancillary structures etc.) / No Permanent Structures (e.g. tent camping, etc.)
Planning Permitted	• Licence application under **Hotel and Guesthouse Accommodation Ordinance (Cap. 349)**, or • Certificate of Compliance under **Clubs (Safety of Premises) Ordinance (Cap. 376)**	• Generally no such requirement, but other dining, liquid and entertainment functions under different ordinances and subsidiary regulations is required if provided
Planning Not Permitted	• Planning permission through application, amendment and review under s.12A, s.16, s.16A and s.17 of **Town Planning Ordinance (Cap. 131)**, and • One of the above licence	• Planning permission through application, amendment and review under s.12A, s.16, s.16A and s.17 of **Town Planning Ordinance (Cap. 131)**, and • The above licence (if applicable)

Figure 2.2 - Overview of Planning and Licensing Application for NGO/Private Campsites

both the planning permission and appropriate licences. Figure 2.2 is an overview of the planning and licensing application processes.

2.2 Planning Requirements

Land uses for 'Holiday Camp' under the current planning definition covers temporary accommodation and leisure activities for privately operated tent camping grounds (TPB, 2022). In general, the zoning under 'Recreation' for 'Holiday Camp' use is always permitted (Column 1), whereas a planning permission is usually required in other zoning unless specified.

2.3 Licensing Requirements

Any campsite which provides overnight

accommodation or erects with any permanent structure onto a land should require a licence to operate. Though there are different regulatory requirements for licenses, they generally cover the following items.

- No-use restriction requirement: where the lands and/or premises should be free from a use restriction under the government leases and/or Deed of Mutual Covenants;
- Suitability requirement: where the lands and/or premises, including proposed alteration and upgrading works, shall comply with the prevailing standards of building and fire safety, lighting, ventilation and sanitation, etc. as set out in the Building Ordinance (Cap. 123) and the Fire Services Ordinance (Cap. 95) respectively; and
- Fit and proper requirement: the persons of applicants are fit and proper to operate, keep and manage the venue.

This is usually an iterated process. Most applicants may take a year or more for the licences. Concern groups worry the current cumbersome licensing processes will put applicants off from the proper application, in turn encouraging them to operate illegal camping businesses and activities, causing nuisance to the neighbours, polluting the environment and changing the habitat of wildlife.

3. Local Case Studies

3.1 Planning Application

Learnt from the local applications for planning permission under Sections 16 and 17(1) of the Town Planning Ordinance (Cap. 131) for private campsites, a typical case in Pui O showing the difference in decisions made by the Town Planning Board (TPB) will be discussed in detail.

3.2 Planning Application No. A/SLC/155

Planning permission was sought by the applicant to use private lots in D.D. 316, Pui O, Lantau Island in "Coastal Protection Area (CPA)" zone, under Section 16 of Town Planning Ordinance (Cap. 131), for a proposed caravan holiday camp for five years and excavation of land for drainage and sewerage facilities (TPB, 2019b).

The application was rejected in August 2019, by the Rural and New Town Planning Committee of TPB on grounds of not in line with the planning intention of the "CPA" zone to conserve, protect and retain the natural coastlines and the sensitive coastal natural environment and to safeguard the beaches and their immediate hinterland (TPB, 2019a). In addition, as there is a general presumption against development in the "CPA" zone, approving the subject application would set an undesirable precedent for similar applications within the zone and would lead to a general degradation of the natural environment of the area (TPB, 2019a).

In September 2019, the applicant applied under Section 17(1) of the Town Planning Ordinance (Cap. 131), for review of the previous decision to reject the application (TPB, 2019b). In support of the review application, the applicant has provided further justifications, responses and proposals to departmental and public comments that the holiday camp use will benefit the society by organising various activities, improve the environment and landscape quality and achieve sustainable development by providing leisure and recreational activities.

After deliberation, TPB considered that the proposed development would improve the environment as compared to the previous vehicle repair workshop use on-site and the carparks/storage yards in its immediate vicinity. In addition, the board considered that the temporary caravan holiday camp, albeit a new type of development in Hong Kong,was compatible with the planning intention for South Lantau under the Sustainable Lantau Blueprint (SLB) to encourage conservation with sustainable leisure and recreational uses (CEDD, 2017), and temporarily approved the application for three years with conditions on the number of caravans, landscape, drainage, fire service installations and water supplies, etc. (TPB, 2019b).

In summary, planning applications for private campsites under 'Column 2' and especially in the "CPA" zone were rarely approved by TPB unless there is policy support on the development, such as support in setting up campgrounds along the southern shore of Lantau under SLB. However, throughout the lengthy process of planning application, the applicants are required to handle different technical questions put forward from the Planning Department and other Bureaux/Departments (B/Ds) periodically, in addition to taking further steps for necessary actions and planning reviews.

4. International Case Studies

4.1 Overview

Having referred to the overseas cases from different regions in all aspects, from legislation, planning standards, licensing to technological benefits, some essential elements that might be adopted locally are summarized below.

4.2 Legislation and Regulations

New Zealand (NZ) has developed a mechanism for registration, licensing, and control of campgrounds at the legislation level since 1985. The Camping-Grounds Regulations 1985 gives the powers to the local governments to register or renew the operation permit as a campground upon satisfaction with the minimum standards on accommodation, facilities, amenities, cleanliness and sanitation, etc. (Camping-Grounds Regulations 1985, 2021).

4.3 Practising Codes

Other than documenting the rights and requirements in law, the United States (US) have developed their own practising codes to serve the same functions. The health and sanitary codes of different States, such as Michigan (MI) and New York (NY), aiming at protecting the public health, prevention and control of diseases and education, and giving clear definitions on campground and campsites in terms of areas, dimensions and maximum capacity, and the codes for constructing, modifying, licensing, and operating a campground (Legislation Governing Campgrounds Part 125 of Public Health Code, Act 368 of 1978, 2004; Chapter 1 State Sanitary Code Subpart 7-3 Campgrounds (Statutory Authority: Public Health Law, §225), 2001).

4.4 Temporary Licence

To meet the seasonal needs of outdoor recreation activities, NZ and US governments grant a temporary licence for short-term operation of a campground upon satisfaction of core licensing requirements with maximum 28 days (Legislation Governing Campgrounds Part 125 of Public Health Code, Act 368 of 1978, 2004).

4.5 Exemption and Waiver

Exemptions or waivers would be given from the local authorities in NZ and US for undue hardship requiring significant efforts and expenses for full implementation given that the standards in the regulations and practising codes will not be deteriorated.

4.6 Booking System

The booking system “Recreation.gov” is a one-stop portal to provide all the tools, services and information for campers to discover first-hand information, plan the adventure, share their stories, and make reservations for over 113,000 campsites across US under the reservation policies to avoid abuse (Recreation.gov, 2022).

5. Site Suitability Analysis

5.1 Methodology

To identify suitable locations for campsite development, we have carried out a site suitability analysis. Figure 5.1 shows the conceptual model of the site suitability analysis.

Current social issues and background research were first studied for the problem, i.e. to identify suitable locations for campsite development. Considering its complexity, multiple criteria mainly from the literature would be considered to evaluate the site suitability. For example, in the site suitability analysis adopted by Wang et al., (2016), criteria such as aspect, slope, vegetation cover, viewshed, and river are considered, while safety factors such as landslide and fire forest risks are also emphasized by the stakeholders and respondents from questionnaires.

The Analytic Hierarchy Process (AHP) analysis

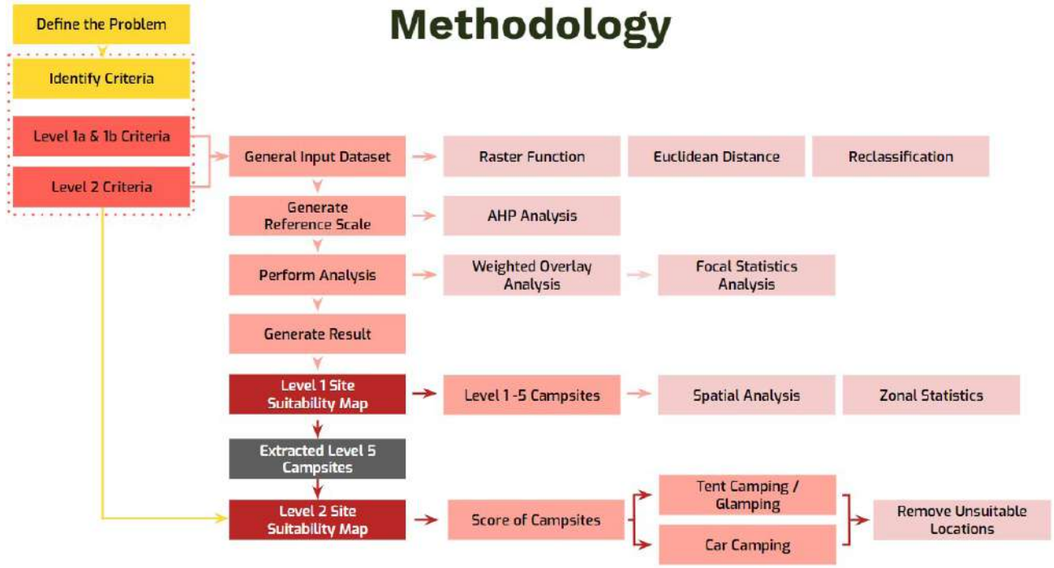

Figure 5.1 - Conceptual Model of Site Suitability Analysis

(Chandio et al., 2012) and weighted overlay analysis were carried out to calculate the weightings of each criterion according to the findings from the questionnaires and stakeholder interviews and combine all criteria with assigned weighting to generate a site suitability index map, respectively.

A focal statistics analysis (Tang et al., 2012) and zonal statistics were adopted to aggregate the scattered results, by considering the contiguity, shape and compactness of each cell in the site suitability map and calculate the mean cell value within a polygon layer, respectively.

The outcome is a series of site suitability maps indicating the suitability for campsite development from 1 (very low) to 5 (very high).

5.2 Selection Criteria for Campsite Suitability

We divided the selection criteria into 2 levels. The first level includes those widely adopted in the literature such as slope, aspect, vegetation, etc. (Wang et al., 2016) Other criteria were identified from the questionnaires and stakeholder interviews such as accessibility and mobile signal coverage. Table 5.1 shows the details of those selection criteria.

ITEM	CRITERION	SUB-CRITERION	SUITABILITY RATING				
			VERY HIGH 5	HIGH 4	MODE-RATE 3	LOW 2	VERY LOW 1
Level 1a Criteria (used for level 1 site suitability analysis)							
1	Slope	Steepness (degree)	x≤5	5<x≤10	10<x≤15	15<x≤20	x>20
2	Aspect	-	S/Flat	SE/SW	E/W	NW/NE	N
3	Vegetation Cover (NVDI)	Index	x>0.360	0.281<x ≤0.360	0.194<x ≤0.281	0.092<x ≤0.194	x≤0.092
4	River	Buffer Zone	x≤50m	50<x ≤300m	300<x ≤ 500m	500<x ≤750m	x>750m
5	View-shed	Number of Observator Frequency	9<x≤24	6<x≤9	3<x≤6	1<x≤3	x≤1
6	Distance from Viewing Points	Buffer Zone	x≤400m	400<x ≤600m	600<x ≤800m	600<x ≤1000m	x>1000m
Level 1b Criteria Index (mainly based on the level 1a criteria Index, and used for level 1 site suitability analysis)							
7	Landslide Risk	Level	1	2	3	4	5
	A Soil	Modified Bare Soil Index	x≤0.113	0.113<x ≤0.142	0.142<x ≤0.175	0.175<x ≤0.204	x>0.204
	B	Soil Moisture Index	x≤0.431	0.431<x ≤0.541	0.541<x ≤0.620	0.620<x ≤0.699	x>0.699
	C Slope	Steepness (degree)	x≤5	5<x≤10	10<x≤15	15<x≤20	x>20
8	Forest Fire Risk	Level	1	2	3	4	5
	A Vegetation Cover (NVDI)	Index	x≤0.1	0.1<x ≤0.2	0.2<x ≤0.3	0.3<x ≤0.5	x >0.5
	B Land Surface Tempera-ture	Index	x≤16.6	16.6<x ≤18.3	18.3<x ≤20.0	20.0<x ≤22.2	x>22.2
	C Altitude	Index	x>498.8	313.6<x ≤498.8	182.4<x ≤313.6	70.5<x ≤182.4	x≤70.5
	D Slope	Steepness (degree)	x≤5	5<x≤10	10<x≤15	15<x≤20	x>20
	E Aspect	-	S/Flat	SE/SW	E/W	NW/NE	N
Level 2 Criteria Index (used for level 2 site suitability analysis)							
9	Accessibility	Walking Distance from Public Transit	x≤ 5mins	5<x ≤10mins	10<x ≤15mins	15<x ≤20mins	x> 20mins
10	Mobile Signal Coverage	Strength of Mobile Signal Level (unit)	0.001<x ≤0.533	0.534<x ≤2.039	2.04<x ≤4.141	4.142<x ≤6.525	6.526<x ≤8
11	Toilet	Distance from Existing Sewage System	x≤200m	200<x ≤300m	30m<x ≤400m	400<x ≤500m	x>500m

Table 5.1 - Selection Criteria for Site Suitability Analysis

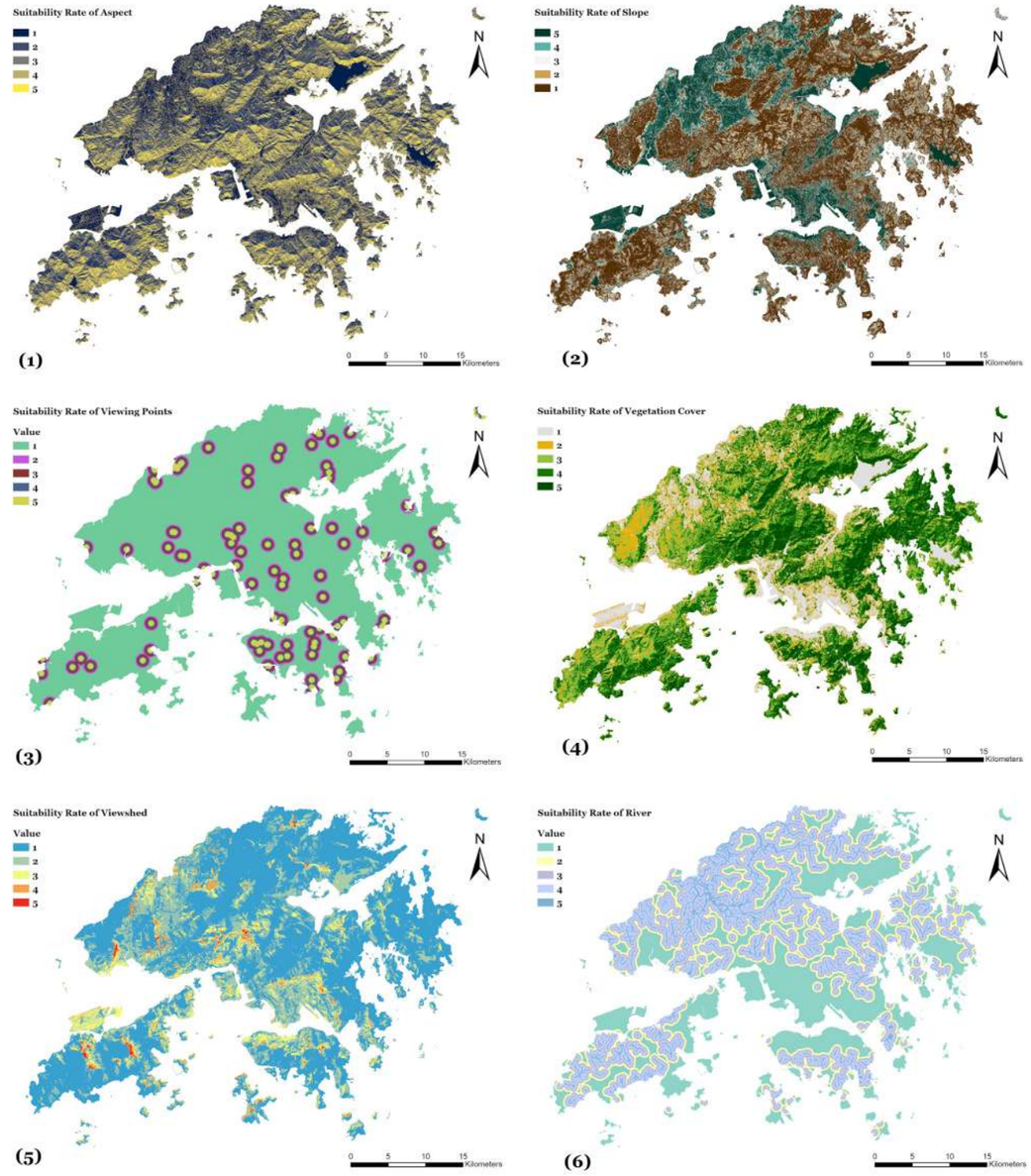

Figure 5.2 - Site Suitability Criteria Layers for Level 1a Criteria (1) Aspect, (2) Slope, (3) Viewing Points, (4) Vegetation Cover, (5) Viewshed, and (6) River

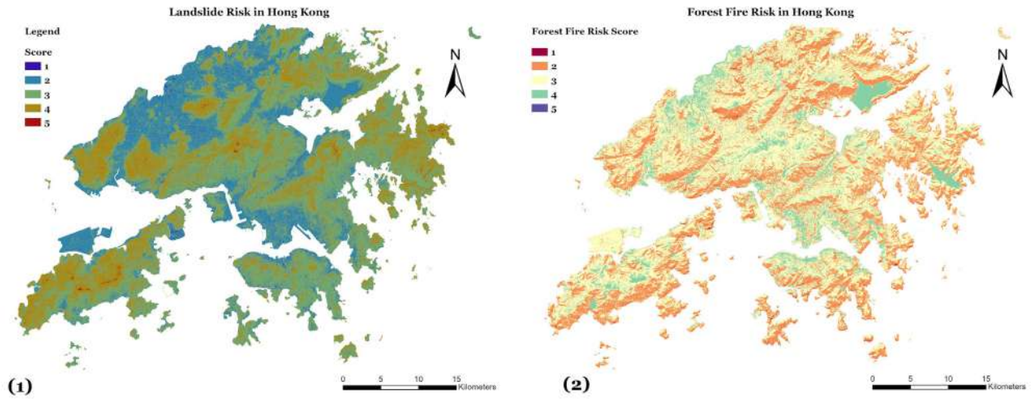

Figure 5.3 - Site Suitability Criteria Layers for Level 1b Criteria (1) Landslide Risk, and (2) Forest Risk

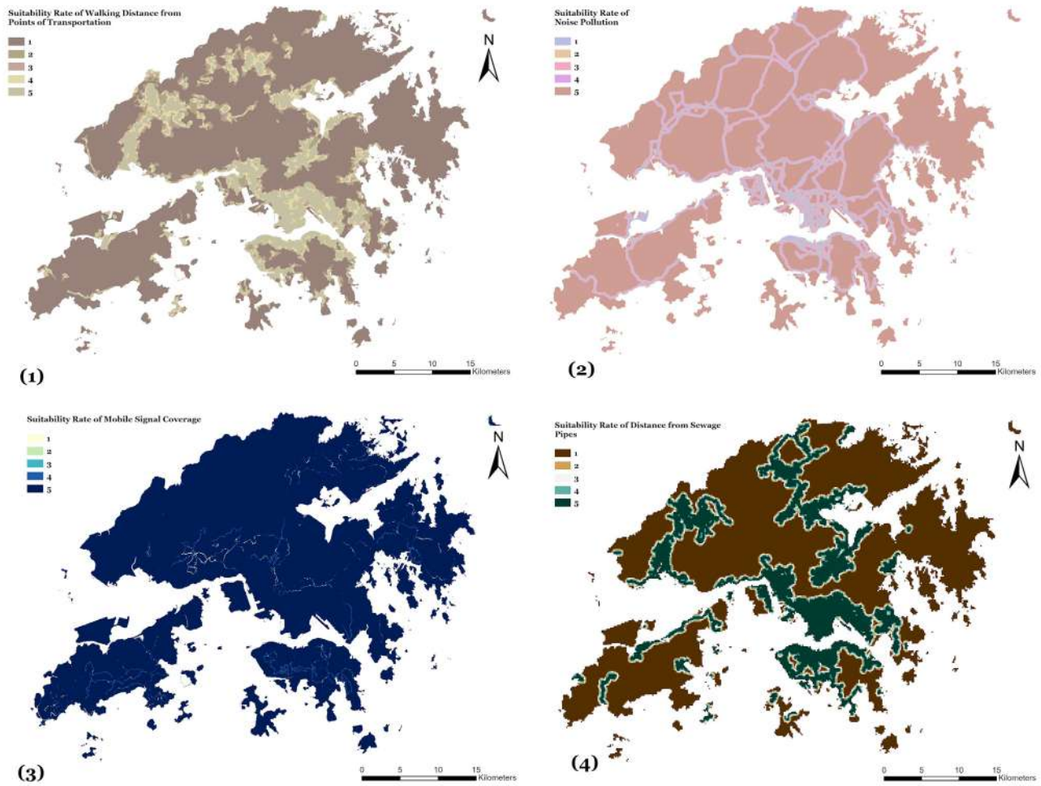

Figure 5.4 - Site Suitability Criteria Layers for Level 2 Criteria (1) Walking Distance from Points of Transportation, (2) Noise Pollution, (3) Mobile Signal Coverage, and (4) Sewage Pipes

5.3 Site Suitability Analysis Results

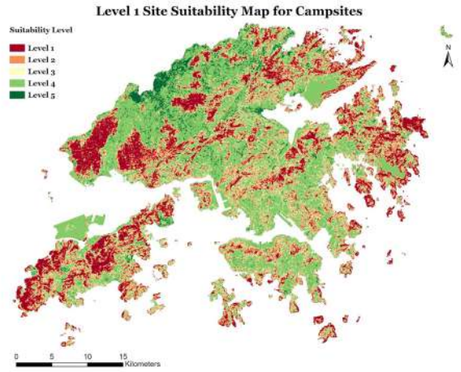

Figure 5.5 - Level 1 Site Suitability Map for Campsites in Hong Kong

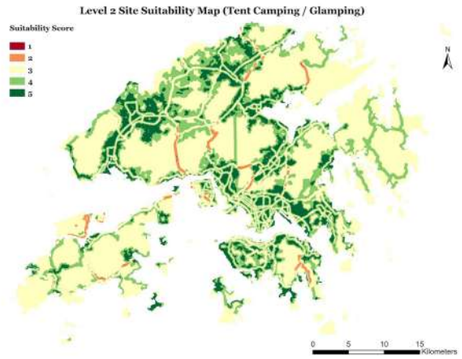

Figure 5.6 - Level 2 Site Suitability Map for Tent Camping/ Glamping in Hong Kong

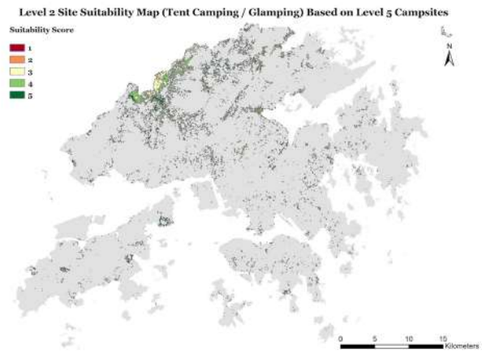

Figure 5.7 - Level 2 Site Suitability Map for Tent Camping/ Glamping based on Level 5 Campsites in Hong Kong

Figures 5.5 to 5.9 show level 1 and 2 site suitability maps for campsites. Different weightings and criteria were applied for tent camping/ glamping and car camping site suitability map, and level 2 site suitability maps were also separately prepared on top of the level 5 (very high suitability) campsites obtained in level 1 site suitability map.

Through this model, we demonstrate how GIS can be assisted in identifying potential sites for campsite development. Other 'suitability' criteria

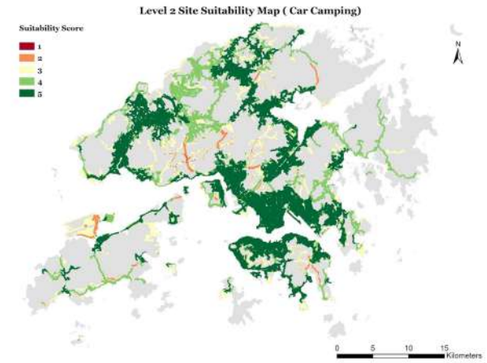

Figure 5.8- Level 2 Site Suitability Map for Car Camping in Hong Kong

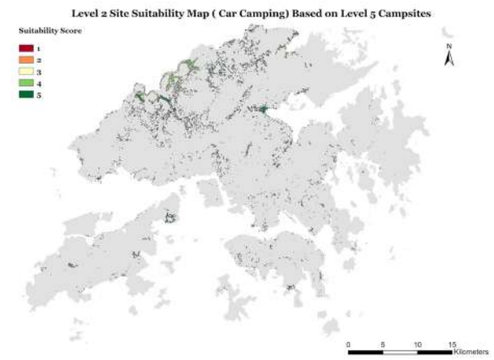

Figure 5.9 - Level 2 Site Suitability Map for Car Camping based on Level 5 Campsites in Hong Kong

SCORE	DESCRIPTION
0	Not suitable for both types of camping (score 1 to 2 in level 2 site suitability map)
1	Suitable for car camping (score 3 to 5)
2	Suitable for tent camping / glamping (score 3 to 5)
3	Suitable for both tent camping / glamping and car camping (score 3 to 5)

Table 5.2 - Description of Reassigned Score

such as topographic features and other land uses can be included to respond to the possible change in the future.

This model offers a quick reference in the course of identifying potential sites for camping activities, and it only eliminates some lands which are less feasible for campsite development, such as the lands along the transportation routes and above the wetlands, etc. To quantify the impacts to the nature, environment and ecology for development of countryside for recreational uses, we understand that further assessments and professional judgements are still required.

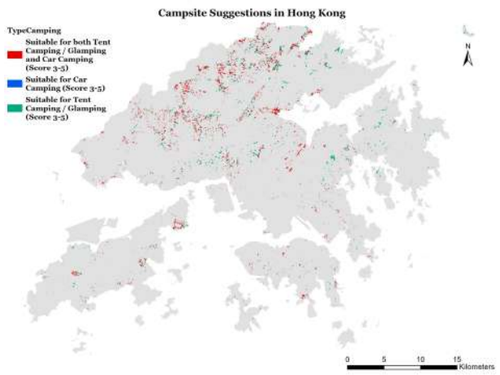

Figure 5.10 - Potential Campsite Locations for Different Camping Styles in Hong Kong

To combine the results for tent camping/ glamping and car camping, a new score has been assigned according to the rules set out in Table 5.2. Figure 5.10 is a combined map showing all potential campsites for different camping styles.

6. Recommendations

6.1 Overview

We propose 10 recommendations with an implementation timeline to re-envision green and sustainable camping as a new recreational opportunity in Hong Kong.

6.2 Emphasis of Importance of Campsite

As claimed by some interviewees about the ambiguous definition and policy of supporting campsite development in Hong Kong, we recommend the government should take necessary actions to formulate the policy on revisiting the scope and definition, amendment of legislation, and provision of recreational lands.

Under the planning definition of “holiday camp”, the licence issue for operating campsites is out of the purview of Office of the Licensing Authority (OLA), but is fully responsible for other accommodation under the Guesthouse (Holiday Camp) licence. The terminology “holiday camp” from the planning and licensing aspects are not at par.

6.3 Planning Standards

Despite provision of the principles and technical requirements, assessment criteria, scale and location for development, and factors or planning parameters for reaching green and sustainable camping infrastructures were not explicitly spelled out in the Hong Kong Planning Standards and Guidelines (HKPSG). We suggest the Government should consider the following aspects in HKPSG.

- General design guidelines: which covers the general design including safety, privacy, accessibility, principles of preserving the natural landscape, adoption of intergenerational and vulnerable group friendly design and zeroscape design, etc;
- Locational guidelines for camping facilities: which considers natural environment, landscape, safety, accessibility, noise and facilities aspects, and conducts visual, ecological and environmental assessments to prove its feasibility;
- Minimum standards for campsite: which includes different dimensions and areas for access corridors, common areas and facilities for the new campsites specified in Table 6.1 with reference to the international standards;
- Minimum standards for auxiliary facilities: which specifies the requirements for auxiliary facilities to support the general functions in campsites listed in Table 6.2 with reference to the international standards.

CATEGORY	SUB-CATEGORY	RECOMMENDED STANDARDS	REFERENCE CASE OR STANDARDS	REMARKS
General	Minimum Area of each Campsite	300 sq. meters	-	By multiplication
	Minimum Area of each Unit	60 sq. meters	NZ, MI and NY (note: the maximum capacities in NZ and MI are not the same. NZ is 9.8 sq. meters for A, whereas MI is 1,200 sq. feet for B.)	By multiplication
	Minimum no. of Unit in each Campsite	5	NZ	Consideration of administrative convenience
	Maximum Capacity per Unit	4	NZ	See dimension of camping platform
	Minimum Dimension(s) of Camping Platform	a) 2.4 x 2.4 meters b) 3.0 x 3.0 meters	NZ	Consideration of the sizes of Asian for accommodation of: a) 2 adults and 2 children, and b) 4 adults
	Minimum Distance between Units	3.5 meters	NY	Natural or artificial shades should be erected to separate adjacent units if the minimum distance is inapplicable.
	Space for Emergency	Provision of means of escape with assemble area	MI and Hong Kong	In compliance with the prevailing standards set out in relevant regulations if applicable.
	Accessibility to Campsite	All-weather footpaths and roads	NZ	-
Lighting	Coverage	Adequate lighting should be provided along roads/ footpaths, means of escape, at entrances, common areas and facilities to serve the camping recreational purposes.	NZ, MI and Hong Kong	In compliance with the prevailing standards set out in relevant regulations if applicable.

Table 6.1 - Minimum Standards for Tent Campsite

6.4 Legislation & Regulations

Other than the planning standards, Hong Kong also needs a review and amendment of the current

CATEGORY	SUB-CATEGORY	RECOMMENDED STANDARDS	REFERENCE CASE OR STANDARDS	REMARKS
Cooking Facilities	Type	Non-gasoline BBQ stove, waterproof tables and benches for each recreational unit	Hong Kong	Most AFCD campsites offer basic cooking facilities to avoid wildfires which may pose fire hazards and damage to the ecosystem.
	Locality	Within the recreational unit	Hong Kong	
	Utility Sink	(See sewage disposal)	-	Utility sink with filter for disposal of food wastes and waters only
Water Supplies	Type	Portable water and hot water	NZ and MI	-
	Locality	Easily accessible by all recreational units	NY	-
	Minimum Capacity	60 Litres per recreational unit	Hong Kong	1/5 of average daily consumption of freshwater excluding showers. The daily consumption is 130 litres/ppl in 2010[20], of which about 55 litres[21] is used for showers. If showers are provided to the campers, the minimum capacity shall be adjusted accordingly.
	Treatment Requirement	Preferable if the site can implement water treatment system	NY	Preferable to provide treatment but not an essence
	Installation Requirement	-	Hong Kong	In compliance with the prevailing standards set out in relevant regulations if applicable.
Sanitary Fixtures	Type	Basic fixtures include toilets, urinals (for male), hand wash basins	MI	Provision of shower facility is optional in view that the majority are the light camping during weekends and public holidays
	Locality	Easily accessible by all recreational units	Same to the standard for water supplies	-
	Minimum Quantity	Toilet: 2 (Unisex) Basin: 2 (Unisex)	Partially adopt NZ, MI and NY	Provision of urinals is optional if sufficient toilets are provided and accessible
	Additional Quantity	Every 25 campers shall be provided with 1 additional toilet and basin	Partially adopt NZ	The minimum standards for male are adopted for unisex toilet design. Additional toilets should be provided for those designated for females.
	Number of Toilets for 160 Campers[22]	Toilet: 4 (Unisex) Basin: 4 (Unisex)	Partially adopt NZ	-
Sanitary Fixtures (Con't)	Flushing Water Requirement	Preferable, but dry toilet meeting the sanitary standards is acceptable	Hong Kong	-
	Installation Requirement	-	Hong Kong	In compliance with the prevailing standards set out in relevant regulations if applicable.
Sewage Disposal	Removal and Disposal of Foul and Storm Waters	-	Hong Kong	In compliance with the prevailing standards set out in relevant regulations if applicable.
	Utility Sinks	Minimum 2 sinks in each campsite	Hong Kong	-
	Design Capacity	Varied based on functions and services, but normally shall not be less than the capacity of water supplies	Partially adopt MI	-
	Locality	Within the campsite or easily accessible	Same to the standard for water supplies	-
	Installation Requirement	-	Hong Kong	In compliance with the prevailing standards set out in relevant regulations if applicable.
Refuse Collection and Disposal	Quantity	Adequate refuse collection bins in the vicinity of the campsite to prevent nuisance conditions, insect and rodent infestations, and pollution of air and water	Hong Kong	-
	Locality	Easily accessible	Same to the standard for water supplies	-
	Materials of Containers	Durable refuse container with close-fitting lids	Hong Kong	In accordance with relevant practical codes
	Others	Provision of bins for recycled wastes	Hong Kong	In accordance with relevant practical codes

Table 6.2 - Minimum Standards for Other Facilities of Campsites

regulatory requirements for developing outdoor recreational activities.

The review should cover whether the authority under Section 4 of Hotel and Guesthouse Accommodation Ordinance (Cap. 349) should be enabled to execute the powers of issuing the Guesthouse (Holiday Camp) licence for the activities and subtypes currently out of the scope. Review of the powers to the authorities for patrolling and prosecution are essential from the land management point of view.

6.5 Temporary Licence

To meet the seasonal needs of camping activities, Hong Kong can make reference to NZ and US practice to issue a temporary licence with concessionary waiver for part of licensing requirements under the pre-approved list for short-term operation, say not longer than 3 months.

The pre-approved list for different recreational purposes can be identified from the site suitability analysis result after going through large-scale impact assessments such as Environmental Impact Assessment and Traffic Impact Assessment, and removal of other unfavourable sites examined by relevant B/Ds. Such a list can be reviewed annually to reflect the latest situations.

6.6 Application Exemption

Many campsites situated at the remote areas might be hard to connect to the water supplies and sewage systems for water flushing toilets. Exemption might be given to the applicants if the hygiene and environment can be maintained by the substitutes, such as the use of dry toilets. Another example is the exemption of building area for management offices for operation of a campsite if it is less than a certain area.

6.7 Booking System for Campsites

The lack of a centralized booking platform may dampen campers' adventure if the first-come, first-served campsites are not securely booked. Referring to the successful story of the 'Recreation.gov' in the US, we recommend the government introducing a one-stop online booking system with campsite review function, for interactive searching, secure booking and managing all types of the campsites in advance. To avoid abuse of use of the booking system by scalpers, relevant reservation policies such as no. of reservations per year, maximum stay, etc. should be imposed accordingly.

6.8 One-stop Services

Some interviewees encountered the complicated and lengthy application procedures for opening campsites. To expedite the process, it is recommended to introduce a coordination office, to facilitate cross-departmental coordination to

streamline planning and licensing applications as well as to promote sustainable development of campsites in remote countryside. Prior to the submission of applications to TPB and OLA, the coordination office could study the campsite proposals, liaison with relevant B/Ds and provide advice to the applicants.

6.9 Government Funding

Some stakeholders expressed that maintenance of campsite facilities is costly due to rapid deterioration or natural hazards. In addition to the available funding, the government might introduce additional funding support to engage communities and NGOs in the revitalization and conservation of rural areas and to facilitate the development and operation of sustainable campsites. Besides, the government can invite NGO to operate and manage the campsites in the designated sites with the agreement in promoting appreciation of nature conservation and biodiversity via the Public Private Partnership and Management Agreement schemes.

6.10 Attractiveness & Theme

Maintaining attractiveness is crucial to pursue campsites as a sustainable business. We recommend the new campsites to be developed with a variety of attractive themes (e.g. elderly friendly, gorgeous scenic spots, provision of glamping amenities, etc.) to serve campers with different needs. A showcase on themed campsite run by NGO will be introduced in Section 7.2 which includes a variety of ancillary facilities and a full range of activities for different age groups.

6.11 Education

The questionnaire results in our study highlighted that education is essential to address the negative impacts on environmental issues. To this end, educational centers at the campsites are recommended to offer environmental education tours and activities that put sustainable development into practice and allow campers to protect and improve the natural environment.

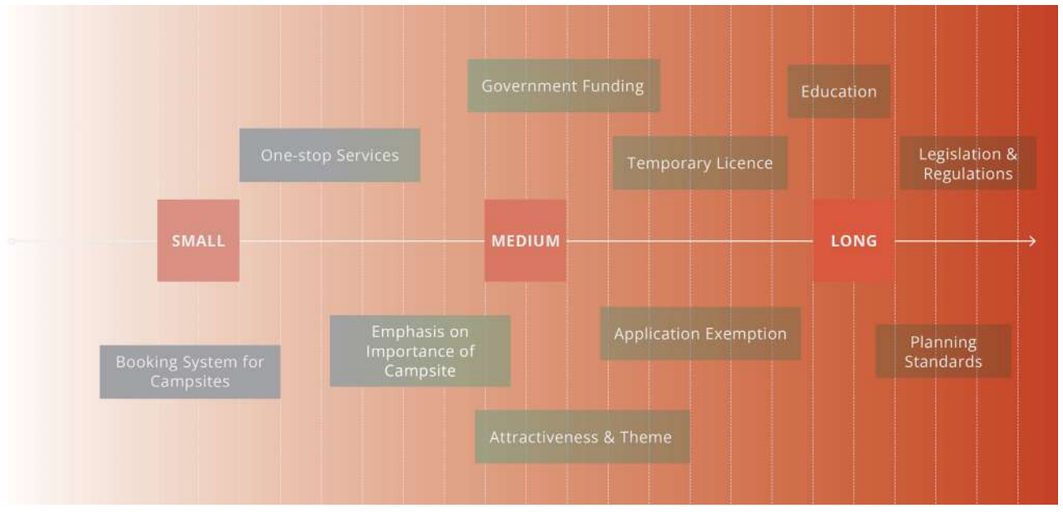

Figure 6.1 - Implementation Timeline of Recommendations

6.12 Implementation Timeline

In pursuing sustainable campsite development in Hong Kong, 10 recommendations are suggested to be implemented in 3 different terms as shown in Figure 6.1.

7. Showcase

7.1 Overview

We proposed 3 spots for different styles and operators in Table 7.1 based on the site suitability analysis results in Figure 5.10. More technical details of the Tap Mun campsite will be provided to illustrate how its design can meet the recommended planning standards in Section 6.3.

SPOTS	TYPE OF CAMPING	PROPOSED OPERATOR(S)	CONSIDERATIONS
Tap Mun (Grass Island)	Tent Camping/ Glamping	NGO	Facing the illegal camping problems reported in *Section 1.1*, we suggested regulating the hotspot to let the nature heal, and setting up a new camping area northward and uphilled at Mau Ping Shan (茅平山) moving away from the cattles' settlement. NGO can be invited to operate the campsite situated on government land and resume the grassland for living of the cattles. *Figure 7.1* is the proposed layout design.
Tai Tam Country Park	Tent Camping/ Glamping, Car Camping	Government	In view of the utilization of BBQ sites in the country parks gradually drops because of the change of leisure behaviour, we suggested transforming some barbecue sites (e.g. closing to existing Tai Tam Barbecue Area Site 2) to meet the functions for tent and car campings (in the next phase) after suitable improvement works by the government. *Figure 7.2* is the proposed layout design.
Shui Hau in Lantau Island	Tent Camping/ Glamping	NGO/Private	With a precedent approval case in Pui O for operating the caravan holiday camp by TPB in *Section 3.2*, some private lands alongside South Lantau Road of Shui Hau under the site suitability analysis have been identified for recreational camping purposes. The site can be designed and operated by an NGO or private operator for themed activities, e.g. appreciation of nearby wetlands and biodiversity, etc. *Figure 7.3* is the proposed layout design.

Table 7.1 - Overview of 3 Proposed Spots for Different Camping Style

Figure 7.1 - Design Layout of Tap Mun (Grass Island) Campsite (Source: Basemap from LandsD & Author)

Figure 7.2 -Design Layout of Tai Tam Country Park Campsite (Source: Basemap from LandsD & Author)

Figure 7.3 - Design Layout of Shui Hau Campsite (Source: Basemap from LandsD & Author)

7.2 Showcase – Tap Mun (Grass Island)

We suggested relocating existing camping activities at the famous Tap Mun Grassland (塔門大草地) to the new campsite for recovery of the grassland and living of the cattles. It is designed to fulfill the recommended planning standards.

The site area is about 9,600 square meters, with 40 recreational units for accommodating a maximum of 160 adults for tent camping at the initial stage. Each unit occupies about 240 square meters, 4 times higher than the recommended standards. Generally, each unit contains 1 rising camping platform (3 meters x 3 meters), 1 BBQ stove and 1 set of table and benches. Separation between each unit is not less than 6.5 meters in light of the privacy concern.

From the perspective of fire safety, two entrances at north and south connect to the existing hiking trails. Fire escape signs to the assembly point are marked within the campsite with adequate lighting.

In view of its remoteness and difficulty in connection to the flushing water and sewage systems, an exception can be given to the operators to use the dry toilets as a replacement. The suggested ratio is about 1:20, i.e. 8 dry toiles for unisex, for both the hikers and staying-over users, which is slightly higher than the recommended standards.

A 600-square-meter child playground and a 700-square-meter open-space area with benches and puff chairs are provided for enjoyment and leisure activities, such as family gathering and star-gazing, etc. by intergenerational groups.

A 32-feet container is placed for the management office for daily operation and maintenance. This is a green-design inclusive, with solar panels erected on top of the container, refuse collection point and dry toilets for power supply of the campsite.

To assess the sustainability of the proposed site, we adopted 10 sustainable impact variables (SIVs) modified from the sustainability assessment system (CSO, 2006), which cover economy, health and hygiene, effects on natural resources, biodiversity and others. Table 7.2

	SIV	VIEWS ON ACHIEVING SUITABILITY
1	Economy	• Promoting eco-tourism and nurture of business opportunities • Supporting local economy and creating long-term and stable job opportunities to local residents, such as catering and leisure services • Encouraging themed eco-tourism activities such as non-motorised water sports and driving
2	Health and Hygiene	• Strengthening in physical health through different types of physical exercises, e.g. camping and other outdoor activities • Relievinging mental stress via outdoor activities including camping via outdoor activities such as camping • Minimizing the effects on hygiene of the campsite and its vicinity by using durable refuse containers with close-fitting lids inside the refuse collection structures and other green designs and other green designs
3	Natural Resources	• Minimizing the one-time disposal by rental services of reusable camping gears and others from NGO campsite operator • Adopting green energy generated from solar panels installed on rooftop of management office, dry toilets and refuse collection point being used for campsite operation • Re-using natural resources for building the campsite infrastructures
4	Society and Social Infra-structure	• Providing a child playground and an open-space area for enjoyment and leisure activities (e.g. star-gazing, etc.) by intergenerational groups • Enhancing interaction and communication within friends and family members • Providing with sufficient spaces for education/ visitor centers near the pier
5	Biodiversity	• Connecting with the natural habitats of yellow cattles and other wild animals • Replanting grass for restoring the natural environment and food supply for the yellow cattles • Separating campers from the settlement of yellow cattles to avoid conflicts between human
6	Leisure and Cultural Vibrancy	• Limited camping styles to be provided in an outlying island at the initial stage, but more styles may be developed through continued operation and improvement of the site. • Nurturing rich cultural heritage (e.g. 400-year Tin Hau Temple and revitalised villages) and local Chinese traditions (e.g. Tin Hau birthday celebrity) for appreciation • Providing a variety of leisure activities including hiking, swimming, diving and non-motorised water sports, etc.
7	Environment	• Forbidding motorized activities within the campsite area and its vicinity • Separating campers from the settlement of yellow cattles to avoid conflicts between human beings and wild animals • Comparably less connection to the nearby sewerage system because of its remoteness but alternative setups (e.g. dry toilets) may reduce such an impact
8	Technology	• Using an online system for reservation and general campsite management • Setting up information kiosks in campsite with multiple languages and voice supports • Less stable mobile network coverage in the campsite area, but the public Wi-Fi hotspots could be setup on the smart lampposts along the hiking trail and within the camping area in future.
9	Mobility	• Semi-paved access/hiking paths with adequate lighting to the campsite • Scheduled public ferry services available • Around 20-minute walking/hiking distance to reach from the pier due to separation of the campers from the settlement of yellow cattles
10	Land Use	• Campsite outside Permitted Burial Ground to avoid possible conflicts with local villagers • Embracing opportunity of improving existing infrastructure (e.g. Tap Mun Pier is under Phase 2 of the Pier Improvement Programme of CEDD, which the pier will be improved to enhance accessibility) • Depending on how much patrolling and prosecution works be arranged by relevant authorities, but regulation would potentially

Table 7.2 - Sustainable Impact Assessment for Tap Mun Showcase (Source: Author)

lists the assessment with our views on how the Tap Mun showcase will achieve sustainability in different aspects.

8. Conclusion

The study covers an extensive range of, but also intensive, reviews, including the current legislation that regulates the planning and licensing applications and processes, the lessons learnt from TPB's decisions, the legislation and planning standards from the international cases, etc.

A site suitability analysis, connecting to integration of heterogeneous data sources and adoption of advanced urban analytics technologies, has identified the most suitable spots for the conventional and emerging forms of camping based on different technical criteria and the views from stakeholders and multi-discipline experts.

The government, being the most essential stakeholder, can take a step beyond to shape a better Hong Kong with sustainable camping and recreational activities. 10 recommendations in different terms ranging from strategic and legislation to technical and operational levels were provided, supplemented with a sustainable campsite design showcase.

Last, we hope our study would create an opportunity to meet the upcoming demand, and at the same time to achieve our goal - promoting sustainable camping - in Hong Kong. We do wish to develop the trendy camping culture "Camping, but not tampering".

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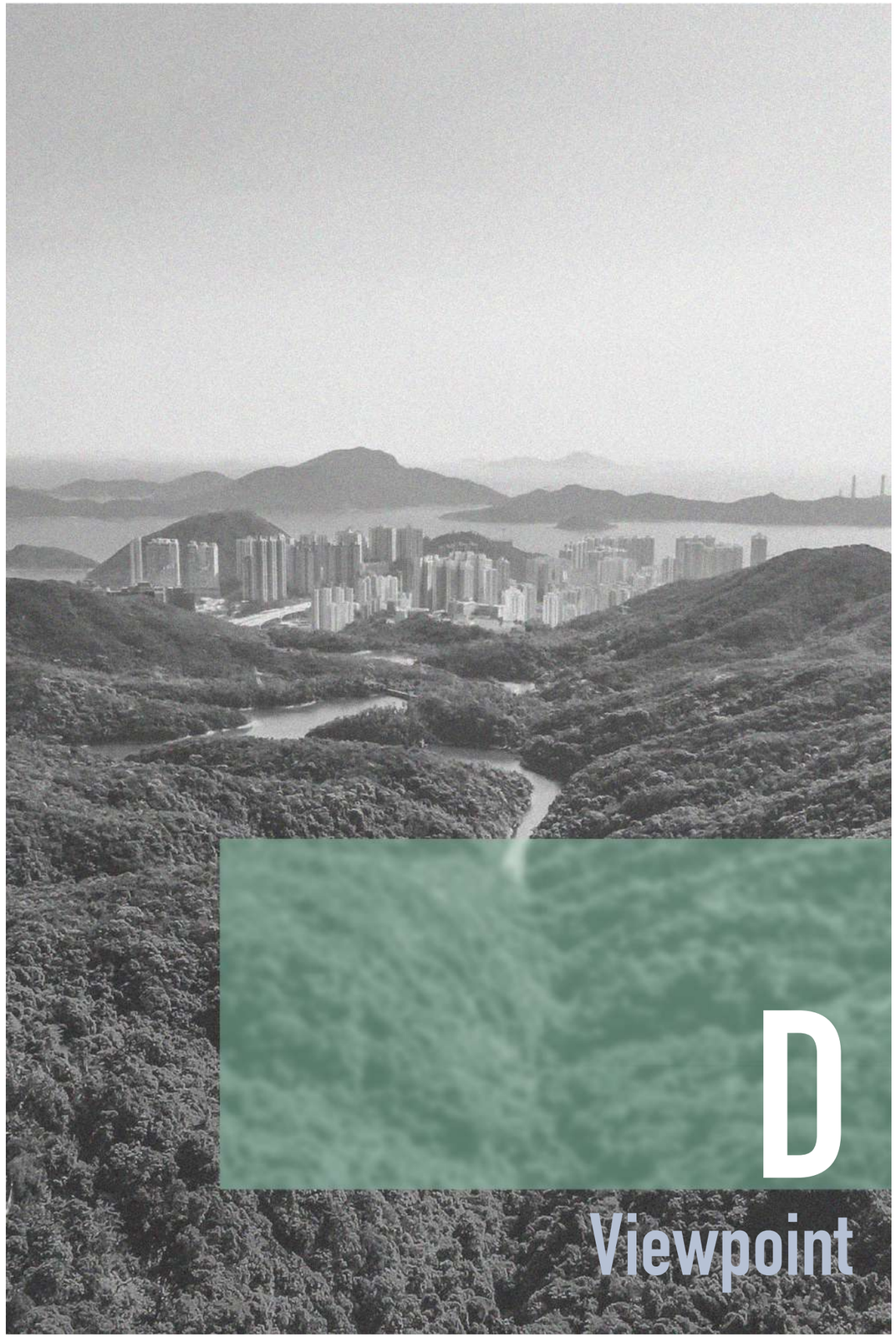

Viewpoint

Prepare for the Visit

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A Flash

Red lanterns swaying at the eaves, colourful flowers dotting along the colonnade; time has come for the turn of season. Chinese New Year is always special to many at home and far afield. The Year of Rat in 2020 was much more than anyone could possibly expected. At the backdrop of festive atmosphere, an unknown virus spread and infected hundreds of people in Wuhan, China. With most people visiting families and friends to during New Year, timing of the outbreak could not be any worse, a betrayal and a stab in the back by a close acquaintance.

Viruses travel from cities to cities, countries to countries, Covid-19 is no exception. In a solemn mood on 11 March 2020, the World Health Organisation (WHO) announced Covid-19 as pandemic, confirming the severity of the virus, its spread and risks to public health while urging nations to take precautions. (WHO, 2020) WHO, Covid-19 and pandemic have since become household words of all ages around the globe. The world has since witnessed several mutated strains of variants and sub-variants first detected from different countries, noticeably Alpha in United Kingdom, Beta in South Africa, Gamma in Japan and Brasil, Delta in India to the present Omicron in South Africa causing huge number of infections and deaths. Many still believe the present pandemic, though annoying, is only the unfortunate event of a century. Is deadly pandemic rare?

Drifting Sands

Human faces many types of diseases throughout his journey. Our immune system effectively handles many common infectious diseases, our bodies could learn, over time, how to deal with the intruders. However, it is zoonotic diseases or viruses that abruptly breaking through the animal barrier to infect human that have caused most concerns, and proved to be most deadly. Body immune system simply does not know how to effectively handle such new invaders that could be lethal.

It is aptly to retrace the major outbreaks of

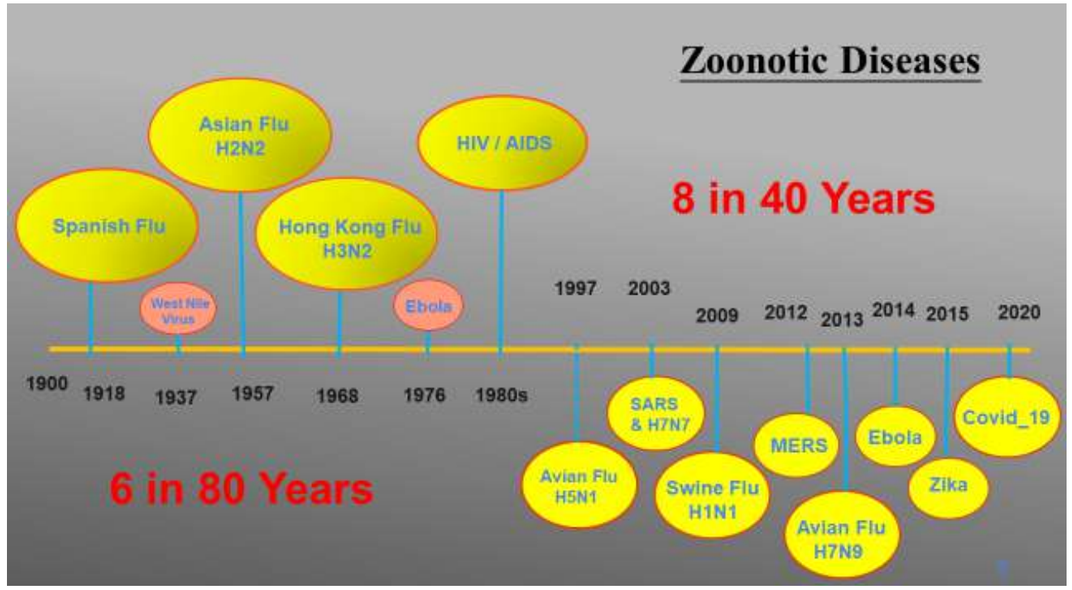

Figure 1 Major Zoonotic Diseases Between 1900 and 2020

zoonotic diseases for just over the last century. With reference to various studies and illustrated in Figure 1 (Baker, Stewart & et al, 2013 and Quick, 2018), from 1900 to the early 1980s, in about 80 years, the world experienced 6 major outbreaks including Spanish Flu (1918), West Nile Virus (1937), Asian Flu (H2N2) (1957), Hong Kong Flu (H3N2) (1968), Ebola (1976) and AIDS (1980s). In more recent times from around 1980 to 2020, for less than 40 years, the world recorded 8 major outbreaks including SARS and Avian Flu (H7N7) (2003), Swine Flu (2009), MERS (2012), Avian Flu (H7N9) (2013), Ebola (2014), Zika (2015) and Covid-19 (2020). More major outbreaks of zoonotic diseases occurred in the immediate past 40 years than the 80 years earlier; major outbreaks had become significantly more frequent, or more than doubled, even putting aside smaller outbreaks. For example, Avian Flu of the H5N1 strain was found and infected a number of people in Hong Kong back in 1997. It was known that H5N1 caused death to millions of chicken before 1997, but there had never been a report of infected person before Hong Kong; with a death rate of 33%, the world was on the edge. (Specter M, 2012) Fortunately, with the swift responses from Hong Kong, the virus was contained from spreading, the world breathed a huge sigh of relief.

Cities may have developed in a more orderly fashion equipped with modern facilities, nonetheless, WHO and many scientists have already warned that the world is facing unprecedented health risks brought along by unsettling global factors. (WHO, 2013) First, geo-political rivalry and unilateralism would

continue to polarise the world undermining co-operation, increasing conflict or even leading to wars. Until the western nations especially the USA, accepts western power has receded and the mindsets of non-western countries, co-operation, though a better strategy, will remain distant, and the world is becoming bipolar. (Mahbubani K, 2019 & Zakaria F, 2021) Regional instability and humanitarian crisis have proved to be closely associated with the spread of diseases in the past with no indication to suggest otherwise in the future. Secondly, the rapid changing landscape of cities, such as extensive urbanisation and migration noticeably in developing countries, and the growing ageing population in cities of developed economies would be challenging. WHO predicts that by 2050, over 70% of world population will live in urban areas. (WHO, 2013) Population growth and demographic changes have put enormous pressure on health care systems of cities and nations. Many cities are simply unable to cope with large influx of people, and to raise sufficient recurrent resources to maintain their health care systems against surging demands, let alone further enhance services. In developed world, established health care systems crumble with age, lacking the resources and robustness to cope with ageing population amid the escalating costs of modern medical or health care services. Thirdly, unlike previous generations before, global citizens are a lot more fluid, mobile and travel frequently for work, social, recreational or leisure reasons. In 2019, over 4.5 billion passengers travelled on scheduled air services (ICAO, 2019), if taking land and sea journeys into account, the number of trips or people movements are simply astronomical. Within a day, a person can be arriving at a completely different city in another continent. Travellers, often carrying a cocktail of bacteria or viruses, have always been the nightmare for infectious diseases control. Fourthly, economic growth often follows by a changing diet and consumption pattern. The demand for food has led to extensive deforestation and clearance of vegetation for farming or rearing of livestock, exposing human to environment, species and pathogens less, or not known during their upbringing. Such trend is threatened to spike further in the coming decade. The proliferation of drugs such as the extensive use of antibiotics in livestock industry, has catalysed the evolution of superbugs detrimental to the health of both animal and human. With growing drug resisting ability, human will be at the mercy of superbugs as patients face higher chance of life threatening complications during illnesses and treatments. Lastly, climate change has accelerated many challenges we are struggling to adapt, and even tip the balance human once shielded. Impact from climate change on infectious diseases is a subject of its own right, but the imminent risks of climate change on public health have been made in no unclear terms by WHO. (WHO, 2013) To cut a long story short and looking at one aspect, longer warm months and flood caused by extreme rainfall may set the ideal conditions for contagious diseases including mosquito-borne diseases so often emerged in developing countries to flourish.

Writing on the Wall

For most people in Hong Kong, the risks mentioned above may be far too remote, even tantamount to fearmongering. Pacing back in time and taking a panoramic view, Hong Kong is facing imminent health risks. The city was at the epicentre of 3 previous outbreaks including Hong Kong Flu (H3N2) in 1968, Avian Flu (H5N1) in 1997 and SARS in 2003. Being an international city and transport hub, there is a constant flow of people in and out of the city, during good and less steady times. In 2019, Hong Kong International Airport recorded over 1,000 flights everyday connecting to over 220 cities worldwide, and serving over 71 million passengers annually. (HKAA, 2019) Besides the airport, an average of about 666,700 daily passenger trips were made between Hong Kong and the Mainland through the 11 boundary crossing points in 2017. (PlanD, 2017) The sheer volume of daily travellers is an inherent health risk. The changing demographic profile of Hong Kong characterised with a rapid ageing population is another concern. Currently standing at about 16% of the total population, people aged 65 or above will increase significantly to 36% or 1 in 3 people by 2049, and more strikingly, people aged 85 or above will more than triple to about 10% by the same forecast year. (PlanD, 2021) With the passage of time, our immune system will be less robust as body ages. Similar to other developed countries, many elders in Hong Kong unavoidably have or would develop long-term illness such as heart diseases, diabetes or cancers which would make them more vulnerable to infectious diseases, needless to say, most of whom live in densely populated districts with limited living space. The impacts of seasonal flu on elderly population could foretell the severity of a pandemic, and sufficient to be a warning for complacency. Sub-tropical climate is both a blessing and challenge to Hong Kong. Coloured with four charismatic seasons, yet scarred, at times, by typhoons and torrential downpour, climate change is threatened to add a further twist into the unknown. Apart from extreme heat and heavy rainfall during summer months, prolonged warm weather is eroding traditional cooler months providing new ground for the breeding and spreading of mosquito, potentially spurring a new wave of infectious diseases.

Contrary to popular perception as a problem for developing countries, mosquito borne disease is,

in fact, a global health risk affecting also urban population in developed cities. (WHO, 2013) Other than malaria, the world witnessed the deadly consequence of mosquito transmitted disease recently with Zika. The virus affects neuro-system development and the brain of foetus causing microcephaly, or small-head baby. With no cure, Zika wrecked unbelievable horror in Brasil in 2015. Scientists now concluded that the disease was spread to Brasil by mosquito from islands in the Pacific before causing lasting damages to thousands of infants and children. The disease then spread from Brasil to the USA, by 2016, there were over 36,000 locally acquired cases, and 46 states in the US reported cases of Zika infections. (Osterholm M T & Olshaker M, 2017 and CDC USA, 2021) If Zika sounds remote, mosquito also spreads malaria, Japanese Encephalitis and dengue fever affecting Hong Kong and the Asia region. Dengue fever is perhaps the most common mosquito- borne disease in Hong Kong. With reference to figures from the Centre for Health Protection in Hong Kong (CHP HK, 2022), although the numbers of dengue fever infections reported in Hong Kong were largely imported and not alarmingly high, upon closer scrutiny of the figures over the past two decades, the continuous increase in annual infections with the overall trend and rate of increase, a fourfold jump in the past decade, should be anything but a concern. (Figure 2) Both Brasil and US saw the onslaught of imported mosquito-borne disease, as a high density city and the world's travel hub under sub-tropical climate, what lessons can Hong Kong

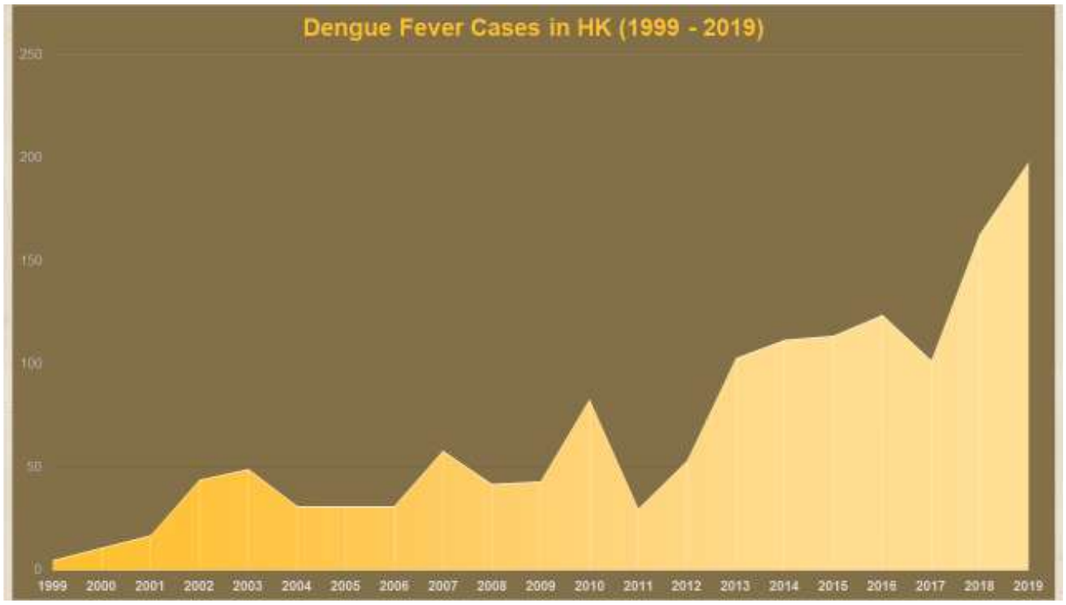

Figure 2: Recorded Dengue Fever Cases in Hong Kong Between 1999 and 2019

learn from the outbreaks overseas? Other than mosquito, scientists have longstanding concern on bats which are so close to yet insufficiently known by human. In 2021, Chinese scientist uncovered 142 bat coronaviruses related to the one that causes SARS, though none closely linked to the virus that causes Covid-19. (SCMP, 2021) Researchers from France and Lao have also found that bat-borne Covid-19 like viruses that are potentially infectious for humans circulate in bat in the Indochinese peninsula. (Temmam S, Vongphayloth K and et al, 2022) With these findings, should Hong Kong be more alert or continue as before?

Beyond the Storm

Truth may be hard to swallow. Diseases and new outbreak will emerge as revealed from history. Public health is said to be vital to the general population, however, few governments and societies think sufficiently long term and prepare for the inevitable. (Osterholm M T & Olshaker M, 2017) Covid-19 has surgically exposed the sheer lack of readiness of cities against infectious diseases, but can we learn? The pandemic has, in fact, opened a window to rethink, a chance to reform, and a pathway to change. Societies must tackle their problems and build resilience. (Micklethwait J & Wooldridge A, 2020 and Zakaria F, 2021) Covid-19 is a stake reminder to the town planning profession the need to conduct a health check in planning our city. To prepare for the future, be it pandemic or epidemic, and to strengthen resilience of our city with insights from Covid-19, the shamrock may, perhaps, shed light on the planning horizon.

First, rekindle town planning and public health with new mechanisms should be the prerequisite in planning for a healthy city. A first-year planning student should be able to tell town planning was embedded with public health, not least, in the earliest piece of planning legislation, the Public Health Act, 1848, introduced in the United Kingdom. With rapid urbanisation and advancement of medical science over the past decades, public health has been taken for granted with importance gradually fading in the minds of professionals, politicians and the general public. It is a common misconception that the health care system will and should be responsible for and dealing with health matters of citizens. Covid-19 has nullified that fallacy by painfully exposing the gap between prevailing town planning and public health concerns. Establishing a mechanism to re-connect town planning and health professionals can instil a crucial conduit to enrich planning of our city with a renewed public health perspectives especially at time the ageing population continues to soar. Collaboration with health professionals not only can facilitate infectious diseases prevention and control, but also proactively

enhance wellness of citizens through planning and promote greater public awareness on health issues. Hong Kong has world class medical schools excel in clinical practices, researches and public health analyses. The synergy between the two professions can translate knowledge from medical science and public health studies, especially those reflecting local demographic, culture, behavioural and climatic contexts, into our urban fabric towards planning healthy community. As a guiding reference in charting a new course, the more encompassing definition from WHO on health, namely 'a state of complete physical, mental and social well-being not merely the absence of disease or infirmity' (WHO, 2019), could be the motto in planning for a healthy city. To improve wellness of citizens, both communicable and non-communicable diseases should to be tackled with town planning taking a proactive role in shaping our living environment backed by sciences and evidence-based knowledge.

Knowledge is the key to unlock the mystery on the impending health risks. Public health concerns, covering both communicable and non-communicable diseases, should therefore be assessed, mitigated and integrated into the planning and development mechanisms, at both strategic and district planning levels, akin to other impact assessments. Equally, planners should launch studies in collaboration with health and medical professionals, and assimilate findings of various researches to formulate, as indicators if not benchmarks, health integrated planning objectives, standards and guidelines befitting the unique planning circumstance and context of Hong Kong. World cities are confronting the challenges from climate change. Climate change has adversely affected physical health of people globally, and mental health of people in certain regions. (IPCC, 2022) Infectious diseases and heat-related morality are some of the aspects needing urgent attention. Could potential health risks from climate change be better visualised, immersed and addressed in Hong Kong? In advocating blue and green infrastructures, would the risks of mosquito-borne diseases be suitably managed in land use planning and layout design? Moderate exercise, such as walking, is widely acknowledged to improve cardiovascular wellness, could planning standards and guidelines for open spaces, pedestrian walkway and utilities installation be advanced to embrace healthy living? With new conurbation proposed to extend towards the vast trace of wetlands and fish ponds at the final frontier, should infectious diseases from migrating birds be considered when formulating the overall planning strategy and land use framework?

Secondly, reshape strategic planning through formulating development framework for an adaptable city should be the focus of post-pandemic planning. Covid-19 has squarely unveiled the inadequacy, from identification to reservation, of sites for a range of emergency uses or facilities such as inoculation station, quarantine centre or Nightingale hospital, in the overall planning of our city. Traditional Chinese wisdom masterly advocates the importance of 'prepare for the rainy day', however, the rain arrived and the city was caught. To improve readiness with lessons from the current pandemic, a hierarchy of facilities should be identified, planned and designated at different districts in association with the medical and health professionals. Facilities under the hierarchy could compose of permanent or dedicated establishments such as hospitals for infectious diseases and network of clinics, supported by an array of temporary facilities such as Nightingale hospitals, quarantine centres and testing and/or screening stations which could be robustly rolled-out and activated when needed. Naturally, such facilities should be designated through the planning and consultation mechanism, made known to the public and local residents to ensure transparency and implementation certainty.

Lastly, reconstitute planning layout and design to strengthen resilience and improve the wellness of citizens should be the priority in local planning. The pandemic has highlighted the urgency to re-examine and re-model various existing facilities to increase our readiness in combating the spread of infectious disease, and to further the general well-being of citizens. Outbreak of the fifth wave of Covid-19 infection brought painful attention to the vulnerability of our elderly homes. Putting aside any outcome of the impending autopsy, undoubtedly, indoor ventilation cannot be the sole focus in upgrading those establishments. Nothing less than a strong dose of action blending enhanced provision standards and design would be rightful. In a compact city with limited buildable areas, multiple or transformable uses within existing sites or facilities should be a new norm in planning and provision of services. From a disease control angle, immigration control points such as airport, border crossing and port are the new flash points. (Giordano P, 2020) Efficiency, comfort, crowd control and security may previously be the key parameters in the planning and design of immigration control points. In the wake of Covid-19, ways in which public health concerns and control of infectious disease are managed when refitting conventional immigration control points would bisect world class from ordinary city. Health integrated planning and design guidelines can provide the renewed benchmarks for future facilities, and assist upgrading works covering emergency uses, overall layout, design and dispositioning of

existing facilities.

Provision of facilities at district level is equally crucial as strengthening immigration control points. Under the hierarchy of facilities mentioned earlier, selected existing facilities from community buildings to open spaces, can be retrofitted with enabling capacities including additional electricity, water and drain/sewage connections to allow rapid transformation of these places into emergency uses. At the backdrop of social distancing and health concerns, ways to improve layout design, operation and management of public open spaces should be instigated, as a matter of urgency. Re-aligning paths and sitting areas of open spaces to increase social distancing, overall route distance, walkability and connectivity could be the first step. The focus should not framed solely on disease prevention, rather a drive to actively promote healthy living in tackling non-communicable diseases. Widely known, moderate and regular exercises can improve cardiovascular endurance and lower the risks of some long term illnesses. Other specific enhancements can be implemented, by phases, in meeting formulated health integrated planning standards and guidelines. District planning should have a renewed focus and mission to improve general health and wellness of citizens beyond outbreak of infectious diseases.

Never Say Never

The world was shocked and alarmed by the outbreak of Avian Flu (H5N1) in Hong Kong back in 1997. The city was widely praised by the international community in stemming the spread of virus. The exiled can never return, but not the viruses. Similar to some other outbreaks, Avian Flu (H5N1) re-emerged in 2003 and was subsequently detected in over 17 countries causing over 450 deaths (WHO, 2021) after disappearing from Hong Kong in 1997. Hong Kong faces imminent risks. Prepare for the next visit!

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Viewpoint

Sustainable Wetland Conservation: A Pragmatic and Evidence-based Wetland Restoration Case Study

Julia W Y Chan and Gary K L Chow

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Mr. Gary Chow is a resourceful ecologist with wealth of experience in ecological research and survey, specialised in ornithological study. He has worked with NGOs, government department and currently is technical director for Mott MacDonald Hong Kong Limited. Through this hands-on experience he has developed niche knowledge on nature conservation. His in-depth knowledge on bird ecology and habitat management provides him insight into wetland conservation in Hong Kong.

Synopsis

In the far northwest New Territories in Hong Kong, the widely open lowland area is packed with continuous ponds and marshes. They are mostly zoned as Wetland Conservation Area (WCA)/ Wetland Buffer Area (WBA) in which development are largely restricted, except for those areas with zoning intention that allows limited development with wetland compensation and commitment on long-term wetland management. In late 2010, the first private compensated wetland at the fringe area of Deep Bay was established under the approved plan of a comprehensive development with wetland restoration at Wo Shang Wai, Yuen Long. This paper provides accountable evidence to demonstrate how to strike a balance between conservation and development to achieve a win-win solution to the comprehensive development in degraded wetland area. The case study of Wo Shang Wai (WSW) (location shows in Figure 1-1a and 1-1b) is the only implemented Public-Private-Partnership (PPP) scheme within Deep Bay in Hong Kong up to this moment. It will provide an insightful example of wetland restoration with development alongside. No-net-loss principle in terms of area or function is evaluated with respect to the proposed conservation plan under the Environmental Impact Assessment Ordinance and Town Planning Ordinance. The eco-function and performance were monitored over time. The effectiveness of mitigation measures for restoration has been evaluated with due respect to wetland ecology. The management regime of the wetland is an adaptive approach so that the Environmental Permit requirements

and s16 approval conditions can be complied. This pragmatic example on balancing nature conservation and development is further elaborated in the following sections.

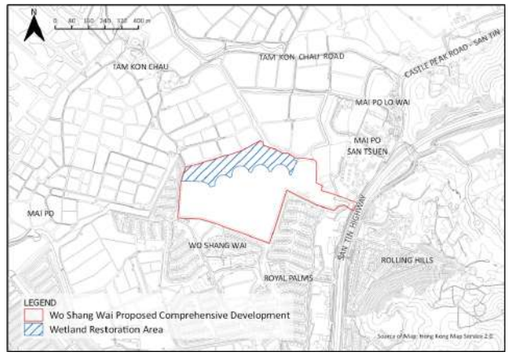

Figure 1-1a Location of the Wo Shang Wai Development and the Wetland Restoration Area

Figure 1-1b Location of the Wo Shang Wai Development in Inner Deep Bay

Background of WCA

In 19th Century, the shore along the Deep Bay from Ha Tsuen and Tin Shui Wai at west to Lok Ma Chau at east is an extensive marshland. Rice cultivation started in early 20th Century, but it was gradually replaced with cultivation of shrimps and fishes since 1940s' which substantially transformed the landscape of the lowland area in the northwest New Territories. Until 1970s'-80s', the whole area was dominated by fishponds and gei wais (for shrimp cultivation), with scattered low density residential villages. Since 1990's, open storage emerged along with the abandonment of fishponds. Until now, most of the fishpond area are kept in an open lowland landscape featured with some fish cultivation, despite the fishery operation has been diminishing.

Other than generating economic return by cultivation of shrimps, gei wai also creates an ecosystem providing habitat and food source for water birds. In 1960's, government started to be aware of the ecological value of the Mai Po Marshes for supporting rich bird life. The ecological importance of the Mai Po Marshes and Inner Deep Bay was recognized internationally in 1995, when it was listed as a "Wetland of International Importance" under the Ramsar Convention, a convention on Wetlands of International Importance especially as Waterfowl Habitat. About 1,500 ha of the land including Mai Po and a large portion of the Deep Bay area were listed as Ramsar Site. The designation led to Mai Po being protected from all forms of development, and the core part of it is managed by World Wide Fund for Nature Hong Kong (WWFHK) as a nature reserve.

Apart from the Mai Po Marshes and Inner Deep Bay, people also realized the fishponds surrounding the Mai Po Marsh and Inner Deep Bay provided an intrinsic ecological function to the birds, forming an integral part of the wetland ecosystem.

Fishpond is a man-made habitat managed for freshwater fish cultivation. When the ponds are filled with water and suitable environment arise, it would be used by the bird community, like diving ducks, grebes and terns. The climax moment comes when the ponds are drained down for harvesting. During the drain-down period, the shallow water region with higher density of fish aggregate in the pond margin that makes some waterbird species, like egret and heron, easier to feed upon. Even after harvesting, the trash fishes left behind were very attractive to the waterbirds, and the exposed mud at the pond bottom created a type of wetland for small waders to feed.

The whole fishpond harvesting cycle become a feast providing abundant food source for the birds. The significance of it is that most of the waterbirds feeding in the fishponds are of local or even global concern, noticeably the Black-faced Spoonbill, which are facing a certain risk of local or global extinction.

In recognizing the ecological significance of the fishponds, Planning Department commissioned a study for the review of the ecological value of fishponds in the Deep Bay Area (Aspinwall & Co., 1997). The study demonstrated the unique international and regional importance of the fishpond system for birds. It has shown the fishpond system as food source and roosting ground for waterbirds is fundamentally linked with Mai Po Marshes as an important wildlife habitat.

In the meantime, the Town Planning Board promulgated a set of planning guidelines for better planning and control of land use in the area. In the Town Planning Board Planning Guidelines No. 12C – Application for Developments within Deep Bay Area under Section 16 of TPO (TPB PG-No. 12C), it adopts land use and planning control through the demarcation and restrictions by imposing two zones, namely Wetland Conservation Area (WCA) and Wetland Buffer Area (WBA).

According to the TPB PG-No. 12C, development proposals in WCA and WBA in the Deep Bay area should observe the "precautionary approach" and comply with the "no-net-loss in wetland" principle to ensure there will be no decline in wetland or ecological functions and no net increase in pollution load to the Deep Bay due to the development proposal. New development within the WCA would not be allowed unless it demonstrates the support of conservation of ecological function of the area and subject to land use permission under the Town Planning

Ordinance (TPO), as well as approval under the Environmental Impact Assessment Ordinance (EIAO). The case example of Comprehensive Development at Wo Shang Wai (WSW) presented below demonstrates what measures that are required to achieve the "no-net-loss in wetland" (Mott Connell, 2008).

Comprehensive Development with Wetland Restoration Area

The Comprehensive Development at WSW falls within the Other Specified Uses (Comprehensive Development to include Wetland Restoration Area) (OU(CDWRA)) zone, neighbouring the boundary of the WCA. The commercial fishponds within the Project site had all been filled during the 1980's, well before the Project Proponent obtained the site. During the planning stage of the Project in early 2000, the site was partially used as open storage and the remaining portions comprised fragmented seasonal marsh, grassland, irrigation ditches and bare ground (Photo 1-1). The proposed development consists of an area of approximately 16ha for residential development and approximately 4.7ha for restored wetland (Figure 1-2). WSW site was not within the 12 priority sites identified under the New Nature Conservation Policy (ETWB, 2004), but the Environmental Conservation Fund (ECF) Committee endorsed on 18 November 2011 the proposal of Environmental Protection Department (EPD) to apply PPP arrangement for the WSW development.

Figure 1-2 Flow diagram showing the wetland restoration scheme with residential development at Wo Shang Wai

The construction restoration work of WSW commenced in 2010 after approval of the planning application in 2009 and Environmental Permit granted with conditions under the EIAO in 2008. A pre-requisite of the development is to provide a wetland restoration area (WRA) of approximately 4.7ha for compensation of the loss of fragmented wetlands, comprising marsh, reed, and ditch, of equivalent size. The operation of the WRA is under a PPP scheme, in which a Non-government Organisation (NGO) should be engaged for the ecological monitoring and maintenance of the WRA in accordance with a Habitat Creation and Management Plan. Meanwhile, the Project Proponent is required to provide a seed fund to the ECF to cover the recurrent long-term maintenance and management cost incurred.

The WRA has been established since October 2012 with continuous ecological monitoring under the frameworks of Environmental Monitoring & Audit (EM&A) programme under EIAO. The monitoring findings have proven that the WRA provides wetland habitats that could compensate for the loss of wetland in term of area and function of the habitats, by supporting target bird species as well as promoting the diversity of flora and fauna species (Photo 1-1).

Photo 1-1: Before Restoration (Top) and After Restoration (i.e. WRA; Bottom)

In the Wetland Management Review conducted after the WRA established for 5 years, the monitoring result demonstrated a single unfragmented wetland has been formed in connection with neighbouring WCA. In comparison with the fragmented, unmanaged and degraded wetland before development, the habitat quality has been significantly improved. The enhanced ecological value is also reflected in the number and diversity of the fauna species recorded in the monitoring. The figure in Figure 1-3 below shows the indicative number of wetland fauna species recorded before and after the establishment of the WRA (Mott Connell, 2008; Mott MacDonald, 2019). It evidenced that a high diversity of wetland fauna was attracted, and a better ecosystem was created.

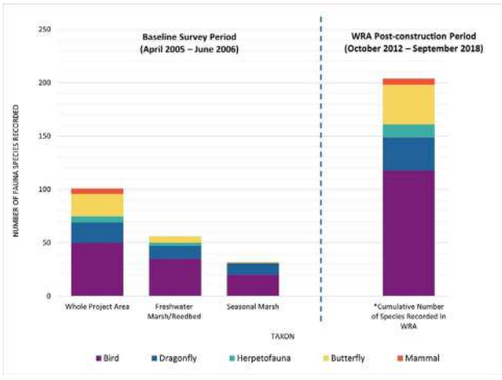

Figure 1-3 Stacked Bar Chart of Number of Fauna Species Recorded within the Project Area during the Baseline Survey Period (April 2005 – June 2006) and Cumulative Number of Fauna Species Recorded in WRA during the WRA Post-construction Period (October 2012 – September 2018)

Remark: Due to different survey effort and transect between the baseline and existing conditions, the number of species* ***recorded before and after WRA establishment* *are indicative only and cannot be directly compared*

Wetland Functionality

In an ecological functionality review conducted for WRA (Table 1-2) by making reference to the

Photo 1-2 Some of the Wildlife Recorded in the WRA
From top left to bottom right: (First Row) Little Grebe, Baillon's Crake, Great Egret; (Second Row) Chinese Pond Heron, Asian Amberwing *Brachythemis contaminata*, Leopard Cat; (Third Row) Chicks of Common Moorhen; Ardeids; Blue Dasher *Brachydiplax chalybea flavovittata*.
Photo Credit: Captain Wong @ Profit Point Enterprises Limited

scoring system for the assessment of the relative ecological importance of sites developed under the New Nature Conservation Policy (NNCP) (ETWB, 2004), it demonstrates that the ecological function of the WRA scored much higher than the previously fragmented and unmanaged conditions. Comparing to managed fishponds of similar size (Photo 1-3) (four connected

Photo 1-3 General Pond Conditions at Non-WRA

Criteria **(Weighting)**	**WSW Baseline (2005-06) Score**	**WRA (2012-18) Score**	**Non-WRA (2012-18) Score**	**Deep Bay Wetland outside Ramsar Site (2004*) Score**	**Ramsar Site (2004*) Score**
Naturalness (15%)	0.5	1.5	1	1	2
Habitat diversity (15%)	1	2	1	1	3
Non-repeatability (10%)	0.5	1.5	1	1	3
Species diversity & richness (30%)	1	3	1	2	3
Species rarity / endemism (30%)	0	3	3	3	3
Total (Full mark = 3)	**0.58**	**2.48**	**1.6**	**1.9**	**2.85**

Remark: *The data were extracted from AFCD (2004). Survey periods were not provided.

Table 1-2 Summary of scores under different scenario using NNCP as reference

fishponds in neighbouring wetland area with total area similar to WRA) (indicated as Non-WRA in Table 1-2) and the Deep Bay Wetland outside Ramsar Site (defined in the list of priority sites for enhanced conservation under NNCP, AFCD (2004)) that covers much larger area than the WRA, the functionality score of the WRA is again much higher than those single usage habitats (i.e. fishponds).

Observations from Functionality Review

The assessment results showed that the size of wetland is not directly proportional to the ecological functionality of the wetland. Although the Deep Bay Wetland outside Ramsar Site has a much larger area than the WRA, its ecological value is lower than that of the WRA. When compared to the non-WRA of similar size to the WRA, the ecological value of the non-WRA is also lower than that of the WRA. Moreover, the ecological value of WRA is much greater than that of the WSW baseline though the sites are of same size.

Other than land size, design and management regime are also the determining factors for a wetland to become ecologically valuable. When comparing to the non-WRA, Deep Bay Wetland and WSW baseline, the WRA provides more diverse habitats (including ponds, reedbeds, marsh, vegetated/non-vegetated islands, etc.) for wildlife utilisation, while the non-WRA and Deep Bay Wetland are mostly fishponds which are not targeted at improving ecological function, and the wetland habitats during WSW baseline comprised only fragmented marshes which were regularly disturbed by human. In addition, the WRA also

has a good management regime with measures towards hydrology (water level adjustment for providing shallow water margins for wading birds), vegetation control to minimise exotic species and overgrown of reeds, minimisation of human disturbance (confinement of WRA from development portion) and invasive species control (such as apple snails and red fire ant) in the WRA to ensure restoration success, while such management plan is absent for the non-WRA, Deep Bay Wetland and the WSW baseline.

Challenge to Traditional Fishpond Operation

The above example demonstrates a practical case of comprehensive development with wetland restoration in the inner Deep Bay wetland buffer area to enhance the ecological connectivity with the WCA, but the existing traditional fishponds operation in the Deep Bay wetland are facing a threat of being phased out and gradually abandoned. Despite development in the fishponds area are largely limited, not all the fishponds are operated in a traditional way that is beneficial to bird use. Owing to abundant and stable supply of freshwater fishes from Mainland China, and people's preference on marine fish, the demand of local freshwater fish and the pond fish culture activities have been diminished. The abandoned pond is constantly filled up with stagnated water without a water drain-down cycle, and thus no shallow water margin that favour wading waterbirds, nor with exposed pond bed that provide feeding opportunity for shorebirds. Despite the stagnated water is favourable to a certain type of wetland fauna and bird group, the lack of drain-down cycle means its ecological function would be largely impaired. Some ponds were even colonized with weeds and invasive species that further degrade the wetland function gradually.

Worst still, some fishponds may even become hotspots of dumping of construction waste. The runoff pollutes the fishpond water and greatly affecting the fish's habitat. Even the fish farming is still being operated, they may not be operated in a way that is friendly to birds and deprives the feeding opportunity for them. Besides, some operators set up net and trap to deter birds from eating fishes in their ponds, leading countless casualty, and injury. Mix of factors renders the fishponds are not being maintained in a way that is entirely ecologically friendly and violating the intention of zoning the larger area as WCA.

Adaptive Management

In recognizing the degradation of the ecological function due to non-ecologically friendly operation of the fishpond, the Hong Kong Bird Watching Society (HKBWS), a local NGO, has conducted two Management Agreement (MA) projects under the funding support from the Environmental and Conservation Fund (ECF) in the Deep Bay area since 2012 to enhance the ecological function of fishponds through collaboration with fishpond operators. Through preserving traditional fish farming and wise use of wetland, the ecological function of the fishpond was enhanced by means of attracting higher number of waterbirds to use the fishpond (Photo 1-4).

Fishpond in traditional management need regular water drain down that create shallow water margin habitats for birds.

Migratory waders feed in the drained fishpond.

Photo 1-4 Regular water drain down in fishpond favours wetland birds' usage

Despite the fishponds are well recognized of providing ecological function, it doesn't mean it could self-sustain without adaptive management. Along with abandonment of traditional fishery practice, the fishponds are wearing out of its special function to conservation of birds (Photo 1-5). Revitalization is possible, but not self-initiated without funding source.

Fishpond without management is constantly kept in high water level. The ecological value of it is lower than the managed fishpond.

Fishpond being abandoned for long time would be colonized by reed and other weeds that may not be optimal for bird's use.

Photo 1-5 Fishponds without proper management or abandoned not favour for wildlife use

Application of PPP

The plight of the fishponds cannot be improved solely by the commercial fishpond operator if it means to achieve the objective of the zoning intent for inner Deep Bay wetland system. The case of WSW in WBA demonstrates that ecological function can be enhanced through proper design of wetland and adaptive management. The habitats

of pond, reedbed and wetland are creatable, and the ecological function can be nurtured through adaptive measures. Adaptive management, such as vegetation, invasive species and water levels management, is important for created wetland, especially for the initial establishment period as observed from the WSW case study.

The success of the WSW case could be applied to other degraded wetlands, with application of the PPP scheme is plausible to maintain the wetland at its best ecological function. It shall be more widely applied in the degraded wetland that need proper management.

The case of WSW is adopting a "biodiversity net gain" principal that means the type of habitats compensated is better than the types that have been lost. The WSW case demonstrates the concept of wetland compensation is feasible.

The engagement of local fishermen in the Management Agreement (MA) conducted by HKBWS at Deep Bay fishponds, and the involvement of local farmers in Long Valley Nature Park, are both local examples of stakeholders' engagement for conservation works. These management approaches provide alternative ways for effective and sustainable management of the restored wetland in long terms.

Besides, habitat and species diversity enhancement concept could also be incorporated in the compensation wetland. The high biodiversity of the Inner Deep Bay Ramsar Site is attributed to the diverse type of wetland habitat nurtured. Brackish water wetland, gei wai, reedbed and freshwater wetland, all provide specific habitat niche for specific type of wetland fauna. Thus, conservation of the wetland in the Deep Bay region needs a holistic view and balanced effort to maintain habitat diversity and socioeconomic human needs. The mono-aqua pond culture is principally adopted in the fishpond area in Deep Bay, as the fishpond owners livelihood and well-beings are of higher priority than wetland conservation. On the contrary, compensation wetland/wetland restoration in exchange of lands with less ecological sensitivity for development can provide an opportunity to allow the ecological function of the local wetland system be further enhanced. The change of the practice from typical gei wai to creation of freshwater wetland is because the latter habitat is diminishing and greatly needed in Hong Kong. This adaptive habitat adjustment is not possible in traditional fishpond but is feasible if incentive be given under PPP scheme with wetland restoration area/ wetland enhancement area be applied.

All in all, more restoration ideas should be encouraged to enhance the ecological function of the wetland ecosystem. But it needs a sustainable system to provide incentive for habitat creation and adaptive management. The WSW example demonstrates the PPP scheme is workable under the current mechanism, extending this model to wider area could be a sustainable option of maintaining the wetland ecosystem.

Summary

The ecological function of the WCA/WBA in Deep Bay relies on the traditional practice of sustainable fishpond operation. The water drain-down cycle creates different habitat niches for different type of waterbirds to use. But owing to the low economic return of traditional fishpond operation, many fishponds are left abandoned or even used as dumping grounds. Compensation wetland associated with comprehensive development under a Public-Private-Partnership scheme is a balanced means of restoring degraded wetland and satisfying human needs. The private wetland restoration in the Wo Shang Wai, of which 118 bird species and rare mammals have been recorded, demonstrates that the wetland habitat can be restored, and ecological function can be nurtured through adaptive management. The success of the WSW case is a good reference that can be considered to a wider area in the WCA/ WBA, with specific target conservation elements and sustainable management, like stakeholder engagement and creation of diversified habitats to promote ecological linkage with habitats of higher ecological function, that could be further explored.

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Viewpoint

Curating Smithfield – Code Map

Community Engagement Committee, HKIP

Community Engagement Committee is established to raise the understanding of the public towards the planning profession and the profile of the HKIP, to provide a one-stop platform for collaboration between planning professionals and the community, to provide voluntary planning services to facilitate the undertaking of planning-related projects that promote community well-being, to conduct outreach activities and promote community planning and engagement; and to co-create with the community on place-making initiatives in the neighbourhood.

Introduction

The Planning Project Committee, now consolidated with the Community Planning Committee to form the new Community Engagement Committee, has initiated to tell a good story of city development in Hong Kong through the "Curating Smithfield" Project. In addition to co-creating both hard and online copies of the Code Map with the Central & Western District Council (C&WDC) and local artists, we have also produced an audio self-guided tour mobile app in collaboration with a local start-up, Insider Tour. We would like to share the interesting stories behind different checkpoints from a planner's perspective with you in this Journal.

Looking ahead, we will continue to pursue our Smithfield Children's Playground Project with C&WDC, Leisure and Cultural Services Department (LCSD), and other interested stakeholders. Stay tuned and welcome to join us.

Main text

Through the "Curating Smithfield" project, we hope to explore with you the codes embedded along Smithfield, unveiling how this neighbourhood has evolved from an area filled with NIMBY ("not-in-my-backyard" uses) to one full of charms.

Introduction

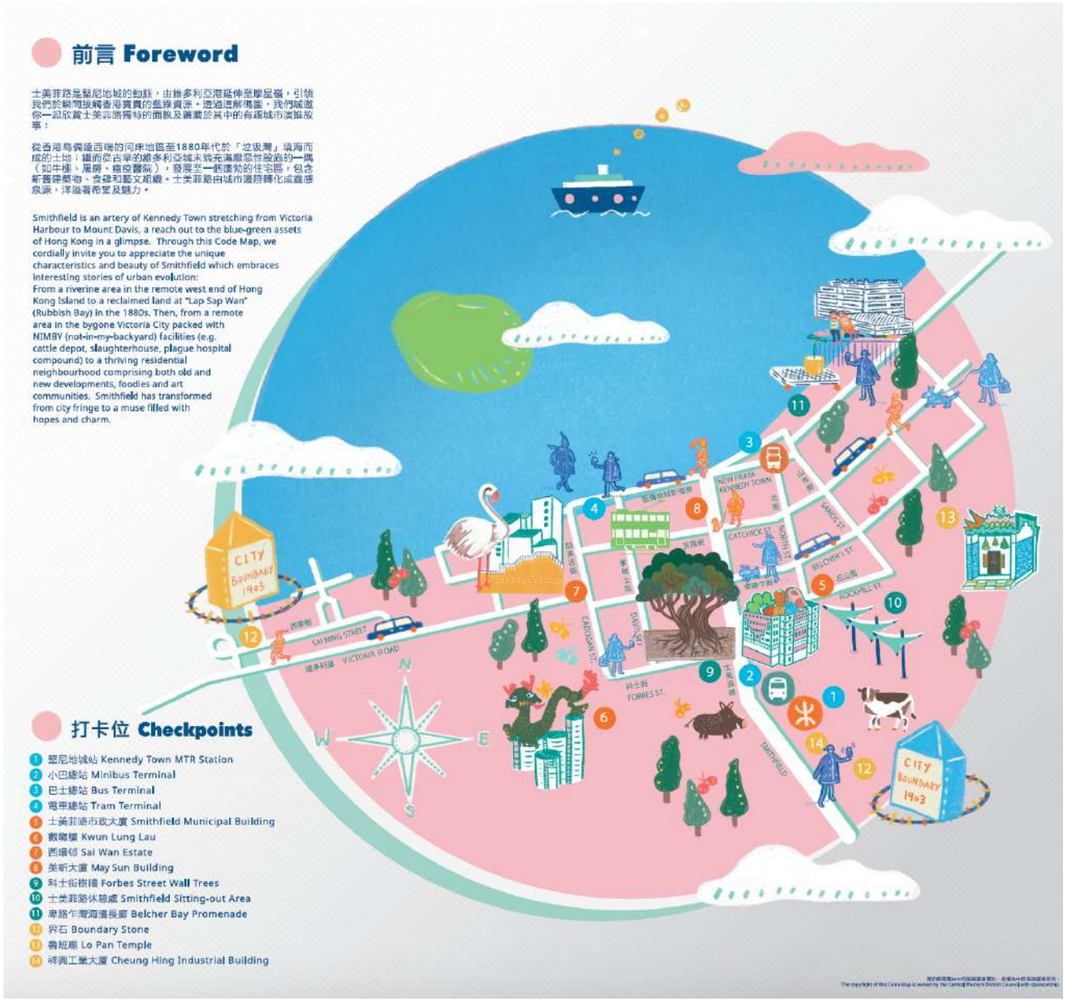
Through the "Curating Smithfield" project, we hope to explore with you the codes embedded along Smithfield, unveiling how this neighbourhood has evolved from an area filled with NIMBY ("not-in-my-backyard" uses) to one full of charms.

Checkpoint No. 1:
Kennedy Town MTR Station

Kennedy Town MTR Station was opened in 2014 as the western terminus of the Island Line, which runs from Kennedy Town in the West to Chai Wan in Hong Kong Island East.

Before the extension of the rail line to this area, Kennedy Town was considered rather remote and could only be reached by bus, mini-bus or tram.

The opening of Kennedy Town MTR Station has



not only made the area more accessible. By virtue of the lovely designed stations along Smithfield, we think Smithfield can be regarded as a living public transport gallery.

Entering into the concourse of Kennedy Town MTR Station, you will find various fascinating community art installations. These artworks have official names - "Blooming Bud" and "Our Memories of the Western District".

"Blooming Bud" is a distinguished piece of artwork in the shape of a split apple created with participation of local residents. The design represents the past, present and future of Kennedy Town. As noted from MTRC's website, the silhouettes of local youth at the centre of the apple depict the seeds, which represent the future growth of Kennedy Town. The handprints of local residents on the skin of the apple provide support to the growth and development of the area. The highly polished stainless steel finish does looks cool. It not only reflects the interior of the station but also the people around. That's why this artwork is said to pay permanent tribute to the people of Kennedy Town.

"Our Memories of the Western District" is another signature artwork found in the MTR station concourse. It is a digital printing artwork on glass, using thousands of photographic images collected from the community to reflect the uniqueness and culture of the neighbourhood.

Kennedy Town is a heavily built-up area, and constructing the MTR line underneath was never an easy task. The Kennedy Town MTR station itself was only buildable through relocating the former public swimming pool premises on Smithfield to 2 Sai Cheung Street North. Both the MTR station and the iconic futuristic redeveloped pool complex are now key local attractions in the area.

Smithfield is also near the North Street Tram Stop of the westernmost terminus of the tramway, which is easily identifiable by its signature "Hong Kong Tram Green" pantone colour. Our tram system also holds the Guinness World Records TM Title of the "largest double-decker tram fleet in service". Another interesting fact is that the tramway marks the original coastline of Hong Kong Island before land reclamation.

Checkpoint No. 2:
Smithfield (Outside Kennedy Town MTR Station Exit A)

Smithfield is about 1.3 km long straddling from Victoria Harbour at the shore of Kennedy Town on Hong Kong Island up to Mount Davis. It is a unique road embracing both blue-green assets in town planning terms and epitomizing the city evolution in a nutshell.

In the old days, the area used to be a riverine area with streams running down from Mount Davis to Sulphur Channel in the remote west end of Hong Kong Island. That explains why the area is filled with blue-green assets. If you search around, you may still hear the sound of running streams along the drains in the upstream area.

Kennedy Town lies on a piece of reclaimed land. Before reclamation works took place for city expansion in the 1880s, the area was literally called "Lap Sap Wan" (or Rubbish Bay). We could find an old record of scavenging contract for the contractor to remove "all offal, mud, filth, dust, sweepings and all other refuse by boat to the depot at Lapsapwan".

Smithfield was built between 1901 and 1910, and remained as a cul-de-sac till mid-1990s.

It begins at the junction of New Praya, Kennedy Town and Shing Sai Road in the north end overlooking Victoria Harbour, and meanders up the south end and used to end technically at Ho Chung, a Hotung ancestral family property at 40A

Smithfield. Like a labyrinth, it intersects with many streets such as Catchick Street, Belcher's Street, Rock Hill Street, Forbes Street, Pokfield Road, and Lung Wah Street.

The road was later extended to Pokfulam Road in 1998 as Smithfield Extension to form part of the road network built to accommodate the traffic from the Western Harbour Crossing with a view to improving the traffic flow in the Western District.

Smithfield itself showcases an inspiring transformative experience of a place from city end to city muse, filled with hopes and positive energy.

It has transformed from a remote area in the bygone Victoria City, packed with the so-called NIMBY facilities such as cattle depot, slaughterhouse, plague hospital compound and gas works, into a thriving residential neighbourhood with a variety of foodie places and budding art communities.

Smithfield has also transformed from an area deprived of any public recreational facilities into one well served by municipal facilities and public spaces.

Wait, why is it called "Smithfield", or should it be "Smithfield Road"?

Smithfield is often mistakenly written as "Smithfield Road". In fact, it is one of the few roads in Hong Kong with no such words "Road" or Street".

Back in 2007, there was a Government proposal to rename it as "Smithfield Road" but was faced with opposition. The proposal was then amended to retain the name "Smithfield". While it's Chinese name was changed to avoid possible negative connotation and it was gazetted on 14 Dec 2007.

Smithfield is said to be named after its London namesake "Smithfield", which shares a common history of accommodating cattle depots which were then demolished and redeveloped into residential areas. The London landmark was promoted by fictions like Charles Dicken's "Oliver Twist" and Mark Twain's "The Prince and the Pauper".

Perhaps, one day, with the budding art communities in the area, Smithfield would become another artistic hub on Hong Kong Island, just like Cattle Depot in To Kwa Wan.

Checkpoint No. 3

Kwun Lung Lau

Smithfield is predominantly zoned for residential use on the Kennedy Town and Mount Davis Outline Zoning Plan. The area is intermingled with a variety of commercial and industrial uses such as offices, eateries, recycling and car repair workshops.

Kwun Lung Lau is one of the most notable public housing estates in the area. Built in 1967, it is one of the first public housing developments built by the Hong Kong Housing Society (or HKHS in short). Kwun Lung Lau is situated outside Kennedy Town MTR Station, overlooking Smithfield from a height at 2 Lung Wah Street.

HKHS is a non-governmental and non-profit organization first found in 1948 to address the post-war housing problems in Hong Kong. It was formally established in 1951 as the first-ever statutory body undertaking public housing affairs.

The name "Kwun Lung Lau" literally means "Watching Dragon Building" as the block layout stretching from Block A to Block G when viewed from above resembles a couching dragon.

One of the signature features of Kwun Lung Lau is its dragon mosaic embedded in the lift lobby. The cute little dragon icon was designed by the wife of the architect of Kwun Lung Lau, Mr Michael Payne.

Phase 1 redevelopment and Phase 2 rehabilitation were completed in 2008 and 2011 respectively.

Phase 1 redevelopment involved the redevelopment of Block G and part of Block E into two 40-storey high rise towers on top of a podium with carparks and social welfare facilities.

Connectivity is always key concern in urban planning and design, especially for an ageing community. Hence, another key redevelopment feature was to include a shuttle lift complex to provide easy access for residents to reach the ground level lift lobby from Smithfield. Before that, residents used to walk up a 30 to 40m high covered walkway.

Kwun Lung Lau has a significant role in the slope safety history of Hong Kong. A tragedy occurred on 23 July 1994 below Block D of Kung Lung Lau, when a landslide resulted in five fatalities and three injured. Heavy rain and leaking water have accumulated behind a thin masonry retaining wall, causing it to collapse.

The disaster has in turn led to a major review of slope safety in Hong Kong. The Geotechnical Engineering Office has carried out a comprehensive investigation into the cause of the landslide, while Professor Morgenstern has conducted an independent review of the investigation.

The Morgenstern Report has made various recommendations, such as the adoption of a more integrated approach for slope stability assessment and the development of a monitoring and inspection programme of buried services affecting slopes.

The sad incident has led to the progressive

introduction of the slope safety regime in Hong Kong.

Checkpoint No. 4

Forbes Street Temporary Sitting-out Area

Smithfield is bestowed with blue-green assets as it connects verdant hills with the waterfront. You may choose to stroll along the waterfront promenade or take a hike up to Pokfulam Road for the greenery. Smithfield brings people closer to nature, and its steep gradient would help joggers burn some calories.

At Forbes Street Temporary Sitting-out Area located right next to Kennedy Town MTR Station Exit C, you may choose to take some selfies with the beautiful stone wall trees, or take photos of the flowers found in the sitting-out areas. You may spot birds, bees, butterflies, or even rampaging wild boars. The magnificent Forbes Street wall trees contain old and valuable trees, and due care has been undertaken to protect the trees during the construction works of the Island Line Extension.

The sitting-out area used to accommodate a slaughterhouse as well as sheep and pig depot, as evident on the 1889 map of Kennedy Town.

Nowadays, you can still see the relics of the incinerators for burning animal corpses.

Before assuming the function of a slaughterhouse, the precinct was situated adjacent to a factory compound of glass and ropes, reminiscing the maritime history of the former government pier at the waterfront. Together, they served an important role in accommodating bubonic plague patients back in the 19th century.

In the 1980s, the nearby residents were increasingly concerned about the potential health issues induced by air pollution, and the slaughterhouse was ultimately demolished and converted into a temporary sitting-out area in 2008.

Forbes Street Temporary Sitting-out Area is now a popular place for everyone, offering a famous spot for ball games; ecological, heritage and masonry tours; selfies and movie shooting.

Another hidden code is the air raid precaution tunnel around the area, though its exact location is still a mystery. Some suggested that the entrance was somewhere near Forbes Street Temporary Sitting-out Area. Government records referenced it as No. 21 of the Disused Air Raid Precaution Tunnel, which is seemingly close to the Lift Building of the Kwun Lung Lau. It does not connect to any complicated underground network and is relatively short in length.

Archives suggest that it was previously named No. 9 Air Raid Tunnel during World War II, which used to store dynamites to create firebreak in the urban areas.

Checkpoint No. 5

Sai Wan Estate

Sai Wan Estate is the smallest and the second oldest public housing estate built by the Hong Kong Housing Authority (or HKHA in short), and the only HKHA's development in the Central and Western District.

It is located on Ka Wai Man Road, adjacent to Forbes Street Temporary Sitting-out Area.

Sai Wan Estate comprises five linear blocks of 10 to 14 storeys, totaling about 640 flats.

The rectangular site perched on top of a very steep slope. Amazingly, the Estate was built into a hillside and managed to overcome the geotechnical challenges at a time dated back in the 1950s.

Instead of having "House" as suffix commonly adopted for HKHA's public housing estates, the name of each of its five blocks has the elegant suffix "Terrace" to reflect the platform features.

The Estate also showcases many aesthetic elements including the beautiful avian mosaic at its doorstep, elegant masonry wall, and modernist architectural facades.

HKHA undertook estate improvement works in the years of 2000 to cater for the need of the ageing population, foster a healthy lifestyle, and enhance barrier-free access. More recreational facilities including fitness exercise equipment, landscaping features, and inclusive design such as railings and seating benches have been added.

It was announced in the 2021 Policy Address that HKHA would conduct a study on the redevelopment of Sai Wan Estate under suitable conditions with a view to providing more public housing units.

Checkpoint No. 6

Smithfield Terrace

Smithfield Terrace located at 71 to 77 Smithfield is one of the most famous private housing developments on Smithfield. It is a high-rise development completed in 1986, comprising four blocks with eight apartments per floor and a total of about 910 apartments.

Do you know that the residential development was once a gasometer site?

Yes, a gasometer of 500 000 cubic feet capacity was built by the Hong Kong and China Gas Company in Smithfield around 1935.

The gasometer was then located to the south of the former cattle depot site in Kennedy Town and the site was considered less risky to house a gasometer.

The Smithfield Gasometer was meant to replace the West Point Gasometer in Shek Tong Tsui which exploded in 1934, claiming over 40 lives and injuring many.

The Smithfield Gasometer was in existence until the early 1980s when Kennedy Town became more populated and there was an increasing concern about the industrial-residential interface with the gasometer. The site was then demolished for the construction of Smithfield Terrace.

Gasometers testified an important part of the gas supply history of our city. Residents in Kowloon used to rely on candles and oil lamps until gas was laid. Nevertheless, gasometers are potentially hazardous installations and the siting is subject to careful consideration and scrutiny.

Today, not many gasometers are left in Hong Kong and it would be a challenge to trace all their previous locations.

Checkpoint No. 7

Cheung Hing Industrial Building

The 12-storey building located at 12P Smithfield is just two minutes away from Kennedy Town MTR station. It was built in 1972 and still maintains many features of the old industrial building such as an old lift for loading and unloading goods.

The presence of the industrial building testifies the evolution trajectory of the area from an industrial to a predominantly residential area to cater for the changing needs of our society.

Back in 2012, the Urban Renewal Authority had plans to redevelop Cheung Hing Industrial Building for residential development as a pilot project to increase housing supply.

However, its stratified title has created development hurdle and the redevelopment proposal was ultimately dropped.

In Hong Kong, multiple ownership is indeed often posing a major constraint to redevelopment, and the issue remains unresolved.

Notwithstanding the above, the building is becoming a budding artist hub and popular homes for co-working spaces.

The artist hub fosters community co-creation and co-working spaces offer flexible shared office premises for start-ups, freelancers, entrepreneurs and small businesses.

Checkpoint No. 8

Smithfield Municipal Services Building

Smithfield Municipal Services Building is located at 12K Smithfield. The building was completed in 1995 and was then called “The Urban Council Smithfield Complex”.

By the way, have you heard of the Urban Council which no longer exists? It was a municipal council responsible for municipal services on Hong Kong Island and Kowloon. It was established on 18 April 1883 but was later disbanded on 31 December 1999.

The municipal duties have been taken up by the Food and Environmental Hygiene Department and the LCSD, along with the Home Affairs Bureau.

Let’s get back to the Municipal Building. It houses Smithfield Public Library on 3/F, and Smithfield Sports Centre on 4/F to 7/F.

The sports facilities include an arena used for basketball, volleyball and badminton courts; a fitness room; a dance room; table tennis rooms; squash courts; children’s play room; activity

rooms; etc. The sports facilities are available for booking and training courses are organised for public participation. The Municipal Building also houses Smithfield Market, which is sometimes referred to as “K-town’s wet market” by the locals and Cooked Food Centre on the lower floors.

Decoding the Municipal Building, you will find that it was formerly a cattle quarantine depot annexed to the slaughterhouse in Kennedy Town. Can you imagine the time when the cattle roamed around the area before being slaughtered?

The cattle depot was closed down in 1986, and was redeveloped into the then Kennedy Town Swimming Pool, Smithfield Market and Smithfield Municipal Services Building to address the shortage of recreational facilities in the Western District.

The development of the municipal building has provided multi-purpose supporting facilities to the evolving residential neighbourhood which was once deprived of recreational provision.

Checkpoint No. 9

May Sun Building

Smithfield is a living gallery of buildings built at different times in history. May Sun Building located at 1-15 Smithfield was built in 1964.

It is characterized by a slanted top, which reflected the practice to “set back” the top stories of buildings in compliance with the building codes of the time. This was basically to allow sunlight penetration for sanitation reasons.

The building codes set limits to the street shadow of a building, and created buildings with a 76 degree sloping profile.

Similar buildings are typically found on the reclamation site at Ferry Point in Jordan by the Chinese nickname “Bat Man Lau: the Eight Man Buildings”. However, this control was later revoked as it created aesthetical concerns and was generally not welcomed. Such buildings conforming to this control still remain in the older parts of Hong Kong.

Checkpoint No. 10

Belcher Bay Promenade

The seaside of Smithfield marks the remains of the original reclamation boundary of Victoria Harbour.

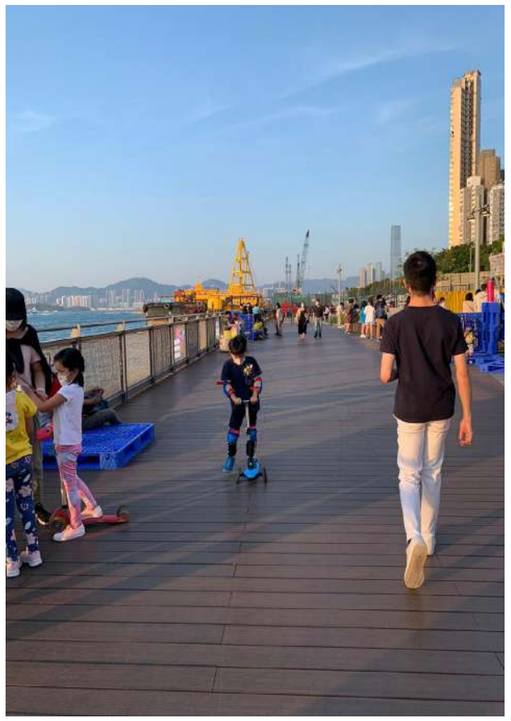
In the 1900s, the area was basically used for industrial purposes such as oil depot and factory compounds. A government pier was located by the sea at the point where Cadogan Street Temporary Garden now exists.

The seaside of Smithfield is seamlessly connecting with the Belcher Bay Promenade, which was fully opened on 19 October 2019. The Promenade provides the public with a round-the-clock leisure space for enjoying the panoramic sea view and sunset.

The project embodies multiple goals such as making good use of vacant harbourfront sites, implementation of harbourfront projects via an “incremental approach”, introduction of multiple harbourfront experiences, and open site management.

The Belcher Bay Promenade features multi-purpose spaces, boardwalks, sundeck benches, pet gardens, community farms, etc. The harbourfront area is now a popular hotspot attracting residents, joggers, visitors and pet owners.

While the Belcher Bay Promenade is providing fun-filled leisure space to people, it is hoped that Smithfield Code Map will help bring people to and from the inland area and the harbourfront with a view to fully appreciating the town planning stories and features embedded along Smithfield.



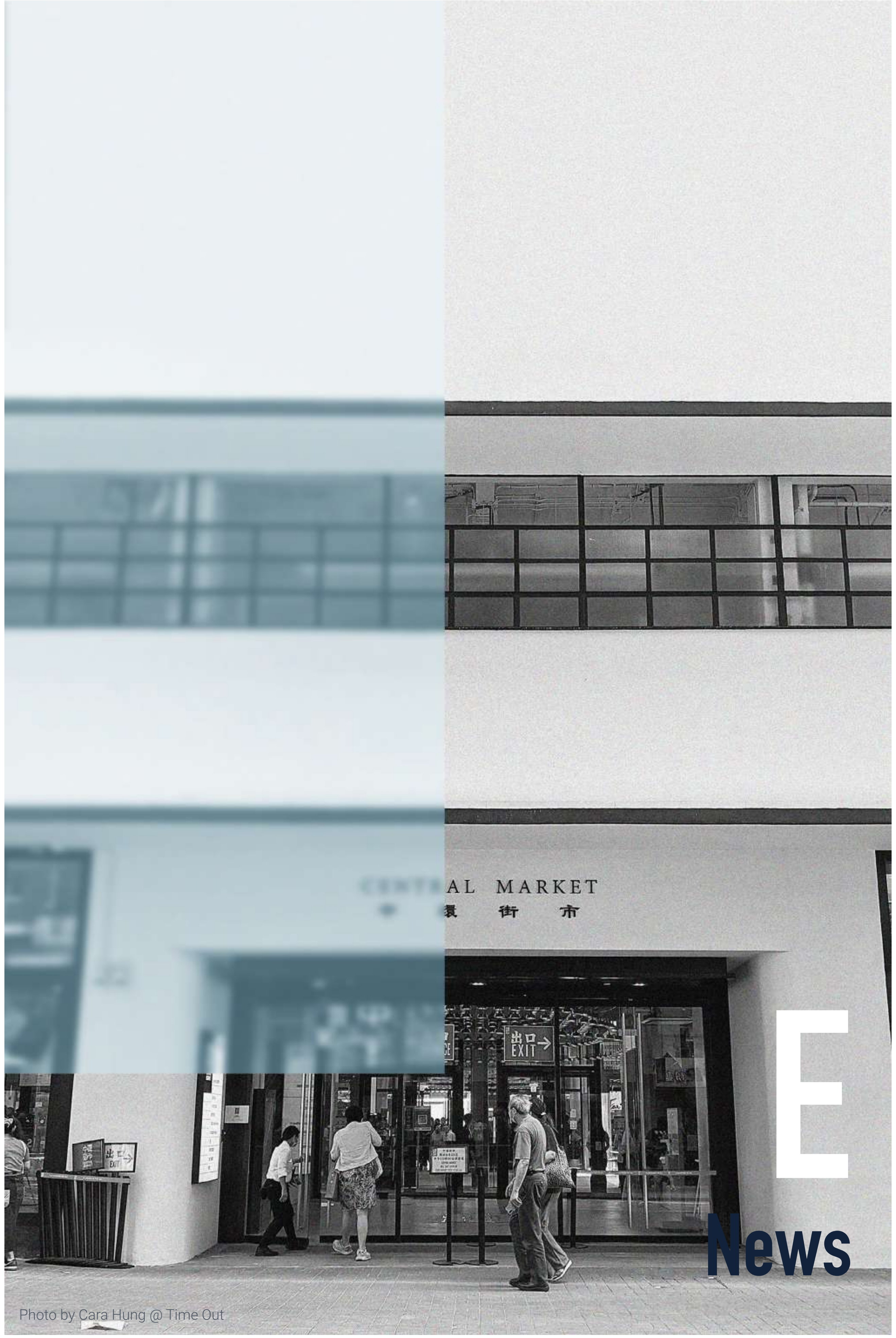


Photo by Cara Hung @ Time Out

Honourary Member of the Hong Kong Institute of Planners

Dr. Winnie Tang, MH, JP
Citation by Prof K K Ling, SBS,FHKIP,RPP
at HKIP Annual Dinner
(1 December 2022)

I am honoured to represent the Hong Kong Institute of Planners (HKIP) to introduce Dr. Winnie Tang, MH, JP, who has been elected by the HKIP Council as our Honourary Member in the year 2022.

Smart city starts with smart planning. Geographic information System (GIS) is the foundation technology for smart city planning and development.

Dr Tang is certainly no stranger to HKIP members for her tremendous contribution in promoting the application of GIS technology throughout her career. She has played an instrumental role to enable widest application of GIS technology in the practice of town planning, which has generated phenomenal benefits in enhancing the effectiveness and efficiency of town planning and urban design works.

Dr Tang is the Founder and Chairman of Esri China (Hong Kong) which has established and cultivated world-leading GIS applications in Hong Kong. Her very first GIS project was for land resumption and planning of the routing and alignment of the West Rail by the then Kowloon-Canton Railway Corporation when she started her company in 1997.

Then her project scope expanded to other areas, covering smart mobility, smart government, smart environment and smart living with a number of award-winning projects such as the Urban Renewal Authority's Urban Renewal Information System for district-based redevelopment.

Dr Tang is keen to develop the problem-solving capacity of our younger generation by better mastering of GIS skills and knowledge. She has offered the professional GIS software ArcGIS for free to all local primary and secondary students since 2016. She has also set up many scholarships and startup funds, aiming to unlock the potential of young entrepreneurs to serve the community.

Dr Tang has made diligent efforts to promote GIS technologies through conferences and writings. She attended many international conferences, including those organised by the World Bank Group, International Telecommunication Union and the Asian Productivity Organisation. She published 14 Chinese and English books and over 600 research papers and newspaper articles. Her Chinese book, "Surfing the IT World", won the publishing award in the category of Commerce and Management of the Hong Kong Publishing Biennial Awards 2017.

The Hong Kong SAR Government has appointed Dr Tang to take up responsibilities in advisory and statutory bodies related to town planning. She was a former Town Planning Board Member. She is currently a member of the Expert Advisory Panel for the Study Related to the Artificial Islands in the Central Waters, and a member of the Lantau Development Advisory Committee.

Dr Tang was awarded Medal of Honour (MH) by the Chief Executive this year in recognition of her dedicated and valuable community service, particularly her contributions to the innovation and technology sector this year.

She was appointed as Honorary Fellow by Lingnan University in 2020, and elected as Distinguished Alumni by HKU's Faculty of Science in 2009. She was elected for the Ten Outstanding Young Persons Award in 2006, the Women of Influence – Young Achiever of the Year Award by the American Chamber of Commerce in 2004, and the Ten Outstanding Young Digi Persons Selection in 2001.

Dr Tang is now serving as an Adjunct Professor in the Faculty of Engineering (Computer Science), the Faculty of Social Sciences (Geography) and the Faculty of Architecture at the University of Hong Kong, and is currently an Honorary Fellow of HKU's Centre of Urban Studies and Urban Planning. She is also a frequently invited guest speakers for master degree courses relating to urban planning and design, urban analytics and smart city technologies.

HKIP members should be familiar with Dr Tang's presentations and teaching. She has spoken to us many times with the latest one being in early 2022 on how smart technologies are driving sustainable smart cities. She is also a frequently invited speakers to share her insights and knowledge with university students and civil servants on topics of how technologies are driving smart and sustainable city development.

According to Clause 5 of the HKIP Constitution, the Council may elect a person as Honourary Member "for reason of his work for the Institute or in the sciences of town planning or related fields". The Council considered that Dr Winnie Tang, being an expert and entrepreneur in promoting application of GIS

technology in Hong Kong, meets the criteria for election as an Honorary Member of HKIP.

May I warmly congratulate and welcome Dr. Winnie Tang joining HKIP as our Honorary Member. I am sure Dr. Tang will continue making contribution in advancing the application of smart city technology to benefit the career development of our members as well as the Hong Kong community at large.

Thank you!

HKIP Awards 2021

Similar to the preceding years, the Institute received a number of submissions for the HKIP Awards this year. Four HKIP Awards (i,e. two Silver Awards and two Certificates of Merits) and one Young Planners Awards were given on the recommendations of the Adjudication Panel, as follows.

Silver Award
Central Market: An Exemplar of Urban Revitalization and Planning

Situated in between Queen's Road Central and Des Voeux Road Central, Central Market was completed in 1939 and closed in 2003. Following the government's launch of its Conserving Central policy in 2009, the Urban Renewal Authority (URA) was assigned to revitalize the market. The first phase of revitalization was completed in 2021 with Chinachem Group as the operator since March 2021, while the second stage will be completed in 2022.

1. A Heritage Site by the Public and for the Public

By following the Oregon Experiment, the planners and the conservationists invited members of the public to participate in the early planning stage, allowing the team to refer to the public needs, especially the creation of an "urban oasis" when designing the new use of the market. Guided by the planners and the professional team, Central Market has more than 10,000 sq ft of public open space and about 100 seats for the public. The team has also preserved the 24-hour passageway, provided support to local brands and start-ups, and overseen community events. The revitalized market was made a "Playground for All" that incorporates STEAM and retail and education-cum-entertainment. It also serves as a rally point that enhances connectivity and creates synergy among neighboring buildings.

2. "Revitalization First" Heritage Conservation

Both the tangible and intangible cultural heritage of Central Market were carefully conserved – from the iconic Streamlined Moderne envelope to "exchange," the spirit of a market's place. The concept of "plug-to-operate" allows for flexible operations and adaptations for retailers, while the market creates a platform for start-up entrepreneurs to display their products and technologies in every part of the market. Based on Building Information Modelling, the planners made appropriate decisions to preserve the heritage site's original fabric while ensuring that the revitalized heritage site is a 21stcentury marketplace that holds collective memories and suits current and future needs.

Existing international heritage conservation charters, local laws, and regulations lack clear guidelines for conserving reinforced concrete buildings. Due to increasing concern over conserving modern architecture, the planners organized international seminars that invited sharing from good planning and heritage conservation practices. It is expected that the Central Market project will encourage the study and discussion of the limitations of Hong Kong's current guidelines on conserving reinforced concrete structures.

3. Place-Making through the Introduction of Historic Urban Landscape

This project opens the study of the development of Central's historic urban landscape under the Conserving Central policy, the invigoration of the CBD during non-office hours, and the improvement of urban infrastructure and ventilation through the introduction of the Historic Urban Landscape approach. It considered the site's relationship with infrastructure, topography, built environment, cultural practices, economic processes, heritage context, and open spaces etc.

Conclusion

From driving the public participation in the early stage of conservation, to leading the professional team in carrying out revitalization work, and to spearheading the operation team with place-making initiatives, the planners have been taking an active role throughout the Central Market revitalization process, making an exemplar of the heritage revitalization planning in Hong Kong

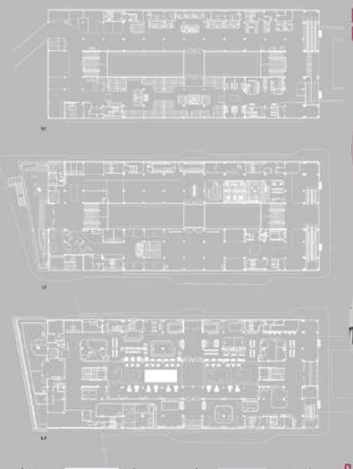
中環街市
CENTRAL MARKET

BACKGROUND OF REVITALIZING CENTRAL MARKET

PUBLIC PARTICIPATION & HUMAN-ORIENTED

EVENTS & HAPPENINGS

HISTORIC URBAN LANDSCAPE APPROACH



HERITAGE REVITALIZATION

CHARACTER DEFINING ELEMENTS

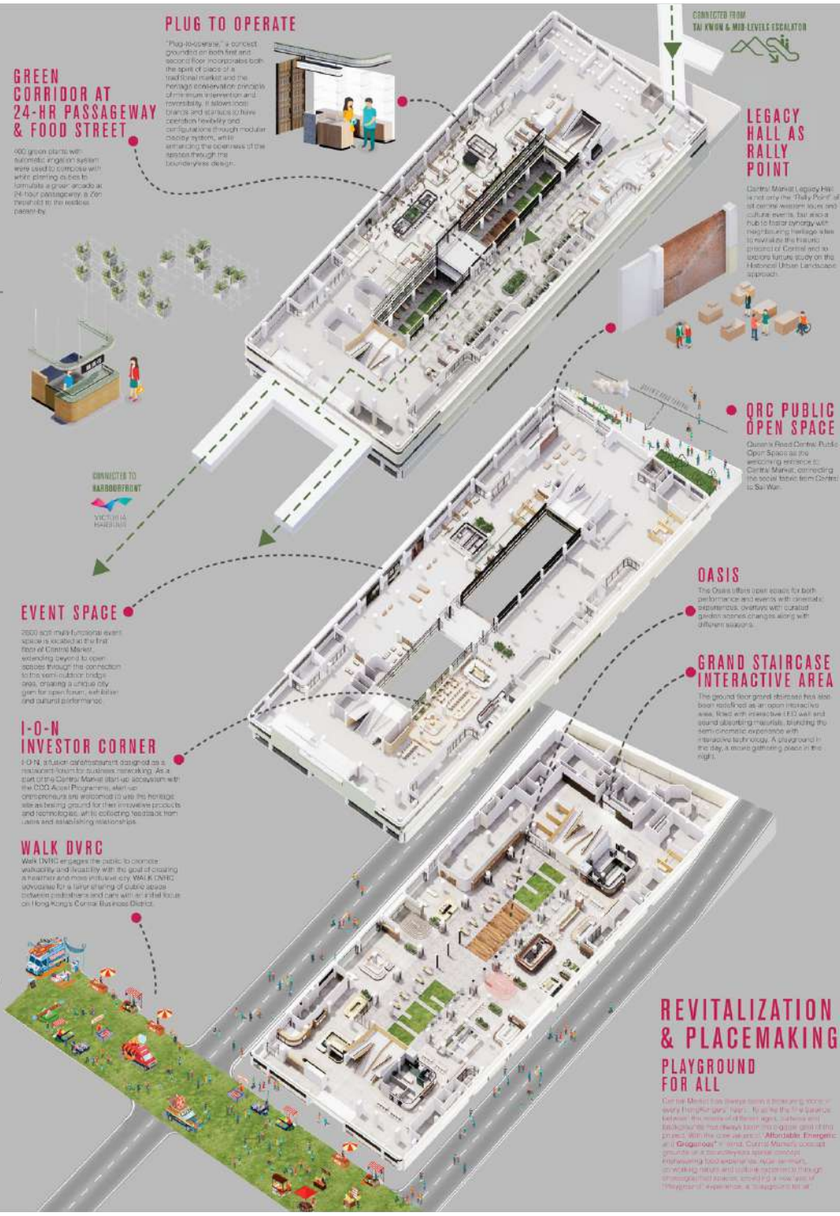
BOUNDARYLESS SPATIAL PLANNING

CURATED HERITAGE EXPERIENCE

URBAN OASIS

PLUG TO OPERATE

GREEN CORRIDOR AT 24-HR PASSAGEWAY & FOOD STREET



PLAYGROUND FOR ALL

Silver Award
Socially Inclusive Waste Management Hub

Planners Role in Social Innovation Project in Designing the Socially Inclusive Waste Management Hub

Echoing local policy initiatives in developing multi-purpose public facility buildings under the "Single site, multiple use" model and waste reduction, the project envisions to re-think and re-imagineGovernment, Institution or Community (GIC) buildings to be both functional and beneficial to thecommunity. Taking the opportunity of a planned six-storey GIC building in Hung Shui Kiu, which includes the uses of refuse collection and recycling facilities, the project proposes an alternative model that puts emphasis on improving the working conditions of our frontline cleaners anddestigmatising the waste management industry to champion a community planning-based approachto designing an inclusive waste management hub and supporting waste reduction.

Upholding "user-centred" and "humanistic-oriented" as design principles, the project focused on understanding workers' pain points and the community's obstacles to reducing waste to develop the design parameters for an inclusive waste management hub. Apart from understanding the operational requirements of each use, system design is used to study the relationship between the community, waste management, and recycling facilities to inform the physical design. Special attention has been given to understanding the movement of end-users and the level of connectivity between spaces and functions to optimise the design and the use of the site to maximise efficiency.

The cross-sector co-design and knowledge sharing processes involving the public, government departments, architects, academics, community green groups, concern groups have also built the community's capacity to reimagine GIC and enact direct changes in the community they are living in, hence, reinforcing a stronger sense of responsibility and ownership of the project. To further improve the user experience, spaces are designed to foster a strong sense of community and a more user-friendly working environment, such as staff social zone for resting and socialising, multi-purpose communal spaces for reading and interacting, upcycling workstations to bring waste to second life. Flexible, comfortable and welcoming spaces, coupled with strong soft programming embracesworkers' need and incentivises community members to be more pro-active and eco-conscious in adopting recycling practices and waste reduction.

While this concept was not adopted by the government departments at this stage, this socially inclusive hub pioneered a development model for future integrated GIC complex building which could be adopted in New Development Areas (NDA) and in retrofitting GICs in the urban areas to contribute to environmental and social sustainability. To further spark reimagination and deliberations on integrated public facility transformations, an innovative project delivery working model, as well as design guidelines concerning cleaners and recycling centre's need, is proposed for built environment professionals' reference to understand users' needs and achieve land optimisation. Aside from improving the cleaners' working condition, the intervention also builds the community's capacity to embrace the waste management industry and sensibility on waste management practices, encouraging the public to establish a routine recycling behaviour and leading to long-term urban sustainability. This project is an exemplar that initiates changes through holistic community planning practices to address societal problems, and promotes sustainability and sense of community in a pragmatic and holistic manner.

COMMUNITY DESIGN OF A SOCIALLY INCLUSIVE WASTE MANAGEMENT HUB - AN ALTERNATIVE MODEL FOR GIC COMPLEX BUILDING

Echoing local policy initiatives in developing multi-purpose public facility buildings under the "single site, multiple use" model and waste reduction, the project envisions to re-think and re-imagine Government, Institution or Community (GIC) building to both functional and beneficial to the community. Under the adverse working environment and benefit exploitation, frontline cleaners working at Refuse Collection Points (RCP) have been stigmatised by the society as occupation with low social status. On the other hand, the increasing amount of solid waste in Hong Kong has become a looming crisis, that increases the pressure to landfills and the waste management industry. Taking the opportunity of a planned six-storey GIC building in Hung Shui Kiu, the project proposes ***an alternative model of an inclusive waste management hub that puts emphasis on improving the working conditions of our frontline cleaners and destigmatising the waste management industry to champion a community planning-based approach to design an inclusive waste management hub and support waste reduction.***

Upholding "user-centred" and "humanistic-oriented" as design principles, the project has a foresighted imagination of the future integration of waste management through a bottom up approach. Not only does the project propose an innovative and inclusive government use complex building, but also contributes to environmental and social sustainability. To further spark re-imagination and deliberations on integrated public facility transformations, an innovative project delivery working model, as well as design guidelines concerning cleaners and recycling centre's need, are proposed for built environment professionals' reference to understand users' needs and achieve land optimisation. Apart from improving the cleaners' working condition, the intervention also aims to build the community's capacity to embrace the waste management industry and sensibility on waste management to encourage routine recycling behaviour, leading to urban sustainability. This project is an exemplar that initiates changes through holistic community planning to address societal problems, and promotes sustainability and sense of community in a pragmatic and holistic manner.

To sum up, the planning and design proposal of Socially Inclusive Waste Management Hub is able to achieve an innovative imagination of the future development of waste management at the community level in the following aspects:

- Demonstrating an effective spatial design of a government complex building in relation to integrating waste management, recycling process and community engagement.
- Showing in-depth considerations and respectful of workers (cleaners and recyclers) as a paradigm shift of the negative image of a waste management and cleansing industry
- Providing operation guidelines and models to encourage citizen-initiated recycling activities.

DESIGN THINKING PROCESS - BOTTOM UP APPROACH

The project identified and illustrated the positive spatial relationships between distinct users and functions, through a bottom-up approach to understand workers' pain points and the community's actual needs. Various stakeholders with diverse backgrounds and expertise, including the public, architects, academics, community green groups, concern groups and also governmental departments, were engaged throughout the entirety of the project development. The engagement process could empower public to enact direct changes in the community they are living in, hence, reinforcing a stronger sense of ownership.

Stage I : Preliminary Works

i. Preparation and Research
ii. Workshops
iii. Discussions among academics across different Disciplines

- Understand the working conditions and needs of street cleaners
- Observe the environment, facilities and operation details of refuse collection points in general, as well as the operation of community recycling centre
- Prepare a checklist to facilitate the formulation of design proposal in the future stages
- Work with community organisations, and explored opportunities for collaboration between community organisations and government department.

Stage II : Developing Design Proposal

i. Organising findings from the first stage
ii. Meeting with stakeholders and architects
iii. Consultation for end users

- Make a design checklist based on different spatial requirements and from the findings from previous stage
- Formulate the scope of design
- Empower neighborhood community through the process of involvement
- Align expectations among different stakeholders

Stage III : Maintaining the Concern

i. Work on in-depth articles based on the formulated design proposal
ii. Encourage collaborations between community organization and district councilors

- Negotiate with government departments on the design proposal
- Maintain constant public discussion and attention
- Keep the project vital in the community

DESIGN GUIDELINES AND DESIGN PROPOSAL

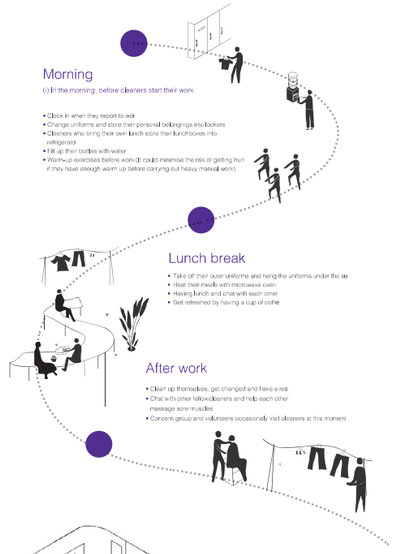
With the views and feedback received during the engagements with stakeholders, the project consolidated with the professional architects and designers to formulate with a set of design guidelines and principles, in order to help facilitate the development of design proposal.

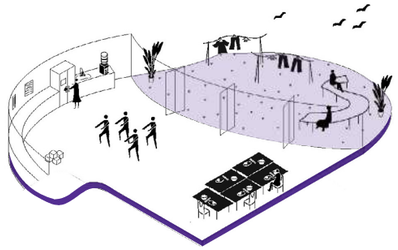
I

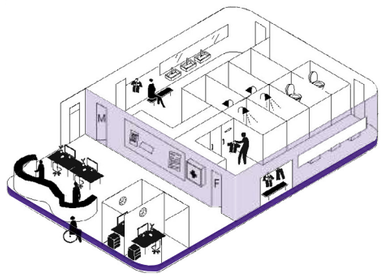
Part I: Design Guidelines Concerning Cleaners' Needs

"A Humanistic and Cleaners' Friendly Environment"

- Introduce humanistic and cleaner-friendly elements to facilitate cleaners' daily working routine
- Consider intangible needs factors
- Set design guidelines for staff social zone, worker bay and waste disposal area





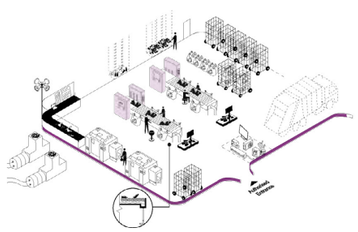


II

Part II: Design Guidelines Concerning Recycling and Upcycling Facilities

"A Well-planned Community Recycling Centre"

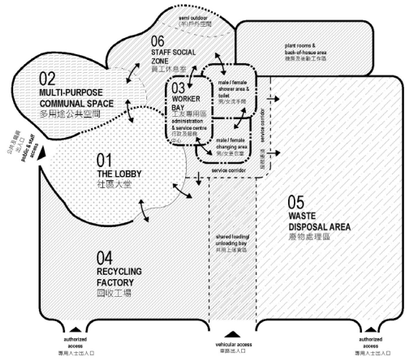
- Advocating eco-friendly, progressive and civilised ways of living, and enhance the community's awareness of living in a way to respect, protect and preserve the natural environment
- Establishing the neighbourhood residents' habit of waste reduction at source via the services provided in the community recycling centre
- Maintaining the centre's organic and sustainable development through civic engagement and the neighbourhood residents' active participation

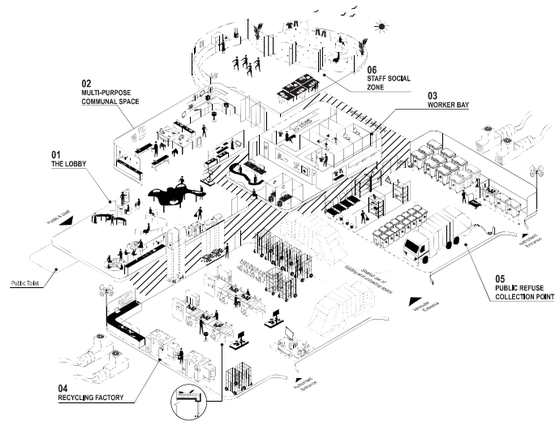


III

Part III: Integration into a Waste Treatment Hub

- Design guidelines for future waste treatment hub design
- Identify positive spatial connectivity and relationship for optimisation of land use and work efficiency





IV

Part IV: Application into actual site of Hung Shui Kiu

- The six-storey multi-purpose building will be built on an idle lawn at the junction of Hung Yuen Road and Hung Ping Road
- Site area is about 735m^2

The dimensions of the building were provided by Architecture Services Department to the members of Yuen Long District Council on 11 March 2019.

ARCHITECTURAL DESIGN

Building Design Characteristics

- Enhance the degree of openness and transparency
- Visual and physical connectivity among different zones
- Maintain material originality and have minimum decorative cladding to reduce production and building waste
- Use of colour to reduce its infrastructural appearance
- Solar photovoltaic system for generation of solar energy

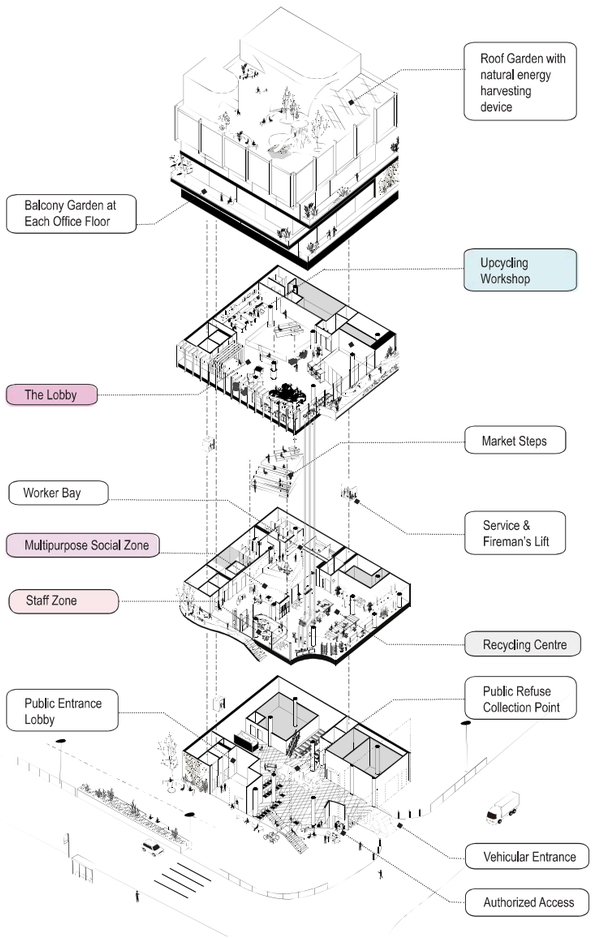
THE LOBBY

The Lobby is the first welcoming point of the waste management hub.

MULTI-PURPOSE COMMUNAL SPACES

STAFF SOCIAL ZONE

Staff Social Zone provides well-lit, well-equipped and clean resting spaces for staff.



UPCYCLING WORKSHOP

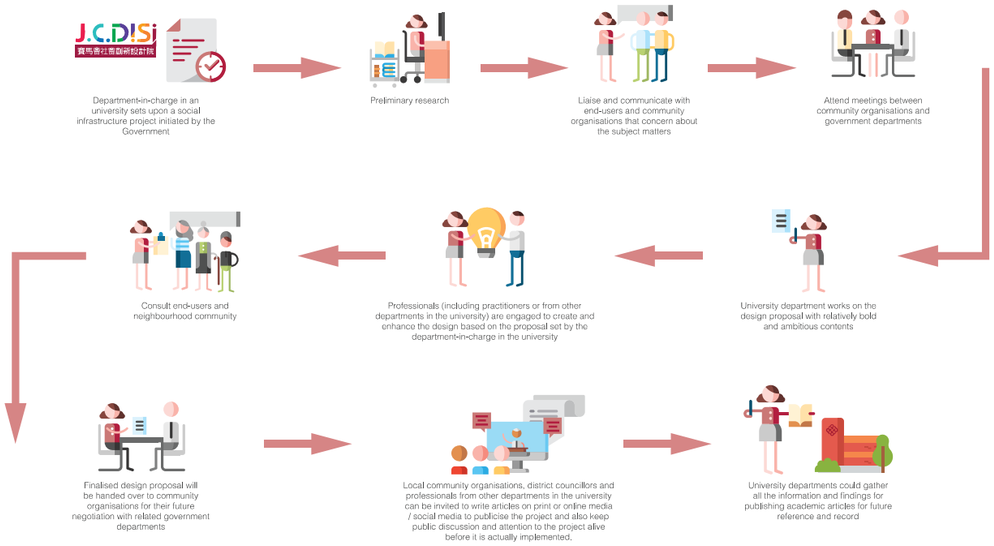
Upcycling Workshop enables public and environmental organisations for conducting community activities such as hand-crafting workshops and repair courses. Neighborhood residents can also borrow equipment here, ranging from hand-held crafting tools, sewing machine, electrical drill to heavy-duty tools.

RECYCLING CENTRE

Recycling Centre is where the pre-sorted recyclables to be sent for secondary sorting, cleaning and packing up. The design will enhance visual transparency and allow public for better understanding on the recycling operation and logistics.

PROPOSED WORKING MODEL OF FUTURE SOCIAL INNOVATIVE PROJECT

To further promote the idea of social innovative projects, a project delivery working model is proposed for future references.



FORWARD AND FUTURE

- With upholding the design principle of "user-centred" and "humanistic-oriented", the project initiates changes to emphasise on public interests, destigmatising and standardising waste management industry.
- The new design gives impetus to march on a foresighted imagination to land optimisation and the transformation of future government complex building through community planning, not only enhancing cleaners' working environment, but also providing a more flexible, comfortable and inclusive environment incentivise community member for more frequent uses.
- The design of the building will become a popular landmark in the community and to raise public eco-consciousness on ways of living and proper waste handling, aiming for a long term urban sustainability
- Integrating waste collection and recycling to under the same roof is believed to be a trend to handle waste through community planning.

Certificate of Merit
"City Gallery Revamping Project"

The City Gallery is branded as the centre of excellence for promoting planning and infrastructure development in Hong Kong. It is managed by planners who are also curators earnestly working in partnership with suitable partners to upkeep and co-create the exhibits and organise events for local and international visitors/audience. The City Gallery revamping project is more than physical retrofitting as it also involves an enhanced strategy in running the City Gallery. Partial revamping works aside, the operation of the City Gallery has been significantly affected by the intermittent physical lockdowns and restrictions under the spell of COVID-19 pandemic. Notwithstanding this, we strive to embrace the hardship and challenges under the "New Normal" by enhancing the way we run the City Gallery through both online and onsite platforms (including tours, exhibitions, workshops and webinars).

City Gallery
展城館

Planning Eye
規劃視窗

Inclusive Exhibits
共融展品

Outreach Programme: Young Ambassadors
外展計劃：青年大使

Monthly Workshop
每月工作坊

Community education: Summer Planning School
社區教育：暑期規劃學校

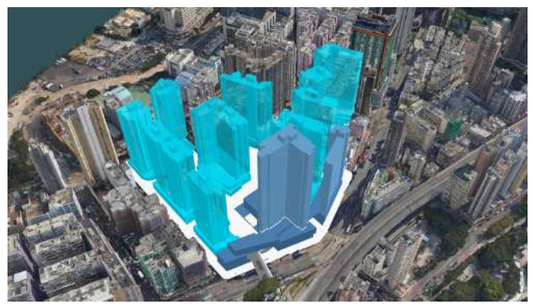
Certificate of Merit
The Kowloon City Action Area 1 (KCAA1)

Planning-Led, District-Based Redevelopment

The Kowloon City Action Area 1 (KCAA1) is located in the central part of To Kwa Wan. It is bounded by Sung On Street to the east, Bailey Street to the south, Ma Tau Wai Road to the west, and Chi Kiang Street to the north. With a total area of about 6 hectares, KCAA1 has a mixed level of urban decay. Apart from some newly built or younger buildings (below 30 years), most of the residential buildings in KCAA1 are low rise old tenement buildings without lift and generally in poor conditions. The area is served by its original traffic network design based on pedestrian and road ratio of about 45%:55% and without comprehensive planning. In 2013, the Urban Renewal Authority (URA) has shifted from project-led piecemeal redevelopment towards holistic planning with the aim to create a livable neighborhood and provide solutions to urban decay problems at a district level, as well as to provide better integration between new and old districts through restructuring and re-planning. Specifically, to enhance the walkability and connectivity and bring more holistic improvement to the urban streetscape and built environment, as well as to avoid potential infill/ incompatible pencil block redevelopment within the area, a "Planning-Led" and "District-Based" approach was introduced for the renewal works in KCAA1. Over the past 8 years, a total of 8 redevelopment projects were commenced in the area by the URA. A phased incremental commencement of these redevelopment projects has allowed a gradual realization of the overall renewal plan for KCAA1. Other urban renewal initiatives have also incorporated to bring more planning benefits to the area and the wider community, thereby encourage broader restructuring and replanning of the neighborhood.

Showcase for Tomorrow's Renewal

URA believes that KCAA1 has showcased an innovative approach for urban regeneration, which sidestepped from the conventional building-by-building process towards a more holistic planning-led strategy, and beyond the statutory planning framework to multiply the planning merits at a district level, while striving a balance between maximizing land development potential and sustainable development.



Young Planners Award
Mr. Long Chi Keith WU

Planning-Led, District-Based Redevelopment

- Town Planner, Planning Department, HKSAR Government
- BSSc in Geography and Resource Management (First Class Honours), The Chinese University of Hong Kong (2014)
- MSc in Urban Planning (Distinction), The University of Hong Kong (2017)
- Full Member, HKIP; Chartered Member, Royal Town Planning Institute; Registered Professional Planner
- BEAM Pro (ND) (EB)
- Fellow, Royal Geographical Society
- Honorary Secretary, HKIP
- Co-convenor, Mainland Liaison Committee; Publicity Committee; HKIP Greater Bay Area Awards, HKIP
- Co-chairperson, Young Planners Group and Student Representative, HKIP (2018 – 2020)
- Director (Education), Hong Kong Public Space Initiative (2014 – 2018)

"Begin with the end in mind." – This is the motto of Keith, which has been empowering and propelling him throughout the past years in the planning profession, with the prime vision to shape our urban fabrics into places filled with attachment and pride.

Keith started to develop his career in the planning profession upon attaining the Master's degree in HKU. He was involved in a wide-spectrum of planning work, ranging from plan making and planning control in public sector, to property planning in real estate sector, including Park YOHO residential development-cum-wetland conservation project and the transitional housing project "United Court" in Yuen Long. These experiences have enabled him to understand and appreciate the development trajectory of the city, and rethink how planners could capitalize on their values and skill-sets to bring far-reaching benefits to urban well-being.

Through leveraging the opportunities during his engagement in the HKIP and other NGOs, Keith endeavours

to promote the planning profession in threefold, namely public education, professional development and networking beyond borders. He has organized and delivered an array of programmes, including local school tours with 15+ school talks/workshops, Annual National Planning Conference for three consecutive years, Greater Bay Area Planning Forum, Joint HKIP-HKILA Symposium, collaborations with the Royal Town Planning Institute and the Singapore Institute of Planners, to name but a few. With his current role as the Honorary Secretary of the HKIP, coupled with his motto deeply engraved in his heart, Keith will continue to contribute and further progress in the planning profession.

List of HKIP Members

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Tam Tze Hoi, Tom	M214	Lam Mun Wah, Joanna	M270	Au Hei Fan	M324	Hui Chak Hung, Dickson	M380
Yeung Chi Wai	M216	Wong Lap Ki	M271	Law Tat Pong	M326	Wong Wai Yin	M381
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29	CHAN KIM ON	陳劍安
30	TAM SIU YING IRIS	譚小瑩
34	CHUNG MAN KIT IVAN	鍾文傑
38	HO SIU FONG BETTY	何小芳
39	LEUNG CHEUK FAI JIMMY	梁焯輝
45	TAM TZE HOI	譚子愷
46	AU WAI KWONG ELVIS	區偉光
47	YEUNG CHI WAI	楊志威
66	PANG CAROLINE Y.	彭浣儀
69	SEDDON KAREN ROSE	薛嘉蓮
72	TO LAP KEE	杜立基
73	WONG SHUN WUN REBECCA	黃舜浣
79	LING KAR KAN	凌嘉勤
87	PETER COOKSON SMITH	
92	BROWNLEE IAN THOMAS	
96	NGAI SIK KEUNG	倪錫強
98	NG CHEUK YEE JOHN	伍灼宜
99	MAK HOI CHEUNG EUNICE	麥凱薔
103	YU LAP KEE	余立基
104	CHEUNG YI MEI AMY	張綺薇
105	WONG LAP KI	黃立基
108	CHAU YAT CHEUNG LAWRENCE	周日昌
111	CHAN HOI YUN HELEN	陳凱恩
113	WONG WAI MAN GINA	黃慧敏
115	WONG YUEN SHEUNG OPHELIA	黃婉霜
117	CHAN TAT CHOI TED	陳達材
118	PANG LAI FAI, WILLY	彭禮輝
120	LEUNG SHU KI	梁樹基
122	HO YING KWONG	何應光
128	NG SUK KWAN	吳淑君
130	LAM BO YIN	林寶燕
132	AU HEI FAN	區晞凡
134	AU CHEUNG MING	區長明
137	CHENG WAN YING JOHANNA	鄭韻瑩
139	YIP OI FONG	葉愛芳
142	BLACK, PHILLIP DOUGLAS	寶力勤
146	CHAN PAK HAY, SIMON	陳栢熙
147	LAM SAU HA	林秀霞
148	LAM TAK KEUNG	林德強
149	LAW TAT PONG	羅達邦
151	TANG MAN HUNG, ROGER	鄧文雄
152	WU MING YEE AMY	胡明儀
154	CHU HA FAN	朱霞芬
156	MACDONALD ALAN FORBES	
157	CHAN HAU YIN MARGARET	陳巧賢
158	NG KIM WAI	吳劍偉
160	HUI CHI MING LAWRENCE	許自明
165	TAM YIN PING DONNA	譚燕萍
166	LAU CHI TING	劉志庭
167	LUK KWOK ON	陸國安
169	YUEN SHING YIP KEPLER	袁承業
172	TANG TSUI YEE, CAROLINE	鄧翠儀
174	HUI CHAK HUNG DICKSON	許澤鴻
175	YIU KUK HUNG, PORTIA	饒菊紅
180	HO CHI WING	何智榮
181	WONG WAI YIN, PATRICK	黃偉賢
182	SIU WAI YIN, FLORENCE	蕭瑋賢

186	LI MAN WAI KENNETH JOHN	李民威
188	YOUNG PUI YIN, EDWIN	楊沛然
189	LO SUI YAN PHILIP	盧瑞炘
190	NG WING FAI STANLEY	吳永輝
193	LEONG YEE TAK YVONNE	梁懿德
200	LEUNG PUI CHU	梁佩珠
201	LEUNG YIP HUNG RAYMOND	梁業鴻
203	FUNG MO YEUNG PATRICK	馮武揚
208	TSE PUI KEUNG	謝佩強
210	SUN CHE YUNG DEREK	孫知用
214	LAI PIK HUNG	賴碧紅
215	TSANG WING KEUNG	曾永強
218	TANG WING KEUNG	鄧永強
219	LAM LIT KWAN	藍列群
221	LAM YUK CHING	林玉清
226	LAW CHUN PONG	羅振邦
227	WU YUK HA	胡玉霞
228	CHEUNG YUK YI ALICE	張玉儀
230	WONG MAN KAN	王民勤
232	CHEUNG SIMON	張業文
233	YEUNG WING SHAN THERESA	楊詠珊
235	YAM YA MAY LILY	任雅薇
236	TAM KIT I	譚潔儀
237	WONG CHIU SHEUNG	黃超常
238	CHOW WAI LING	周惠玲
244	TSANG CINDY ANNE LEE	曾思蒂
245	AU CHI WAI DAVID	區志偉
247	POON KAI LOK	潘啟樂
248	CHAN KING KONG THERON	陳勁剛
250	TONG PO WONG EMILY	唐寶煌
252	SO OI TSZ, TERESA	蘇愛慈
253	NG WAI MAN	吳慧敏
255	MOK KWOK CHUNG DICKSON	莫國忠
256	WONG YUK LING	黃玉玲
258	KWAN YEE FAI, MIKE	關以輝
259	SZE LAI HUNG	施麗虹
260	LAU FUNG YEE	劉鳳兒
264	CHU WING HEI, ALVIN	朱永熙
266	TSANG WAI MAN, VIVIAN	曾慧雯
267	LAM KWOK CHUN	林國春
268	WONG WAI YEE MICHELLE	汪慧兒
269	CHAN SHUK WAH ANNIE	陳淑華
270	LEUNG KWOK MAN LAUTREC	梁國民
273	LAI SHIN KWAN FLORA	黎倩君
274	LO YUK MAN JOSEPHINE	盧玉敏
275	LEE WAI YING JOANNA	李慧瑩
276	YANG CHING	楊　倩
278	TSANG HUNG SHEEBA	曾　紅
280	LO WING YEE	盧穎儀
281	LEE SIN YEE CINDY	李倩儀
282	YUEN MAN SIN	阮文倩
287	LAM MAN YING, JOSEPHINE	林敏瑩
288	LUNG YAN CHEUNG HELEN	龍欣翔
291	CHOW MAN HONG	周文康
292	CHAN KWUN HANG COWAY	陳冠恆
294	CHAN KOK YUN	陳國欣
295	LIU CHUNG GAY, SHARON	廖頌基
296	LAU KIT YING	劉潔瑩
297	NG KA WAH	吳家華
299	LAM MEI YEE	林美儀
300	CHAU YIN MAI, LISA	周燕薇
302	LEE THOMAS	李建華
304	CHANG MING LAI REGINA	張明麗
306	LAU TAK FRANCIS	劉　德
308	LEE KIN KI	李建基
309	CHAN LAI CHEUNG	陳禮璋
310	KAN KA MAN	簡嘉敏
314	LUK SIU CHUEN	陸紹傳
315	LUK YIN SHEUNG VERONICA	陸迎霜
317	LEE KA KAY	李家琪
319	SIU KA LAY, GRACE	蕭嘉莉
320	IP WAI YI, ALISON	葉慧儀
321	YEUNG SHUI LING	楊瑞玲
322	HUI PUI YEE, PEARL	許貝兒
323	FOK CHI WAI, DAVID	霍志偉
324	WONG PUI SAI, KITTY	黃沛茜
325	MAK CHUNG HANG	麥仲恆
326	FU YEE MING	傅義明
327	CHAN SUET YING, CARMEN	陳雪盈
328	CHEUK CHING PING JACQUELINE	卓靜萍
331	YUNG HUNG TAN, NELSON	翁胸坦
332	LAU KAR KAY, ALAN	劉家麒
333	WONG HEI YIN JULIAN	黃曦然
334	YU PUI SZE CANETTI	余佩詩
335	CHAN TIN YEUNG JOSEPH	陳天揚
336	LI KA SING CHARLES	李嘉聲
337	LEE CHUN KIT	李俊傑
339	HO KON CHUNG	何幹忠
340	NG SZE NGA GLADYS	吳詩雅
341	AU PUI YU	區佩瑜
342	LEE MO YI	李霧儀
343	LO SING WUN	盧星桓
344	CHAN PAK KAN	陳伯勤
345	LO OI LING CHRISTINA	盧愛玲
347	LAU SAU YEE	劉秀儀
349	LEUNG ZIN HANG EBBY	梁善姮
350	CHAN HONG LEI	陳康妮
351	SIU YIK HO STEVEN	蕭亦豪
352	TANG KING YAN SUNNY	鄧敬恩
353	LO JANICE BRYANNE WING YIN	盧穎妍
354	CHENG KA MAN, CLEMENT	鄭加文
355	LOK HOM NING	樂晗寧
356	IP PAN WAI	葉斌緯
357	CHEUNG HO WING	張浩榮
358	AU-YEUNG WAN MAN	歐陽允文
359	CHAN WING KIT, KENNY	陳榮傑
360	FUNG KA WUN, EDITH	馮嘉媛
361	KAN CHEUNG HENG	簡昌恆
362	POON FU KIT, BENSON	潘富傑
363	WHITMAN KIRA LOREN	
364	CHAN MOU YIN, CYNTHIA	陳慕然
365	HUNG TING WAI, DAVID	洪定維
366	LEONG KA HO	梁嘉豪
367	CHEUNG HOI YEE	張凱怡
369	HO WING HEI, NANCY	何穎曦
371	YIP SIU KWAN, SANDRA	葉兆筠
372	LAM TSZ KWAN	林芷筠
373	LAW HO HEI	羅晧希
374	CHIU SUNG NGAI, ADRIAN	趙崇毅
375	CHEUNG MAN YEE	張敏兒
376	MAK TSZ WAI	麥芷蕙
377	CHAN DISTINCTION	陳江瑋
378	LAU CHI KING, VINCENT	劉子敬
379	WONG PO KIT	黃保傑
380	TO YUEN GWUN	杜元鈞
381	TANG WAI LAP	鄧偉立
382	AU YEUNG KWAN	歐陽坤
383	LAU SZE HONG	劉思航
384	MO CUI YU, CHARLENE	莫翠瑜
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388	YIP KAM YEE	葉甘飴
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400	WU PETER	吳宗翰
401	LO MAN CHI GIGI	盧曼芝
402	CHAN WING YAN	陳穎昕
403	LEE SI WAI	李思慧
404	TSUI PIK CHUN	徐碧珍
405	WONG SIU MEE	黃少薇
406	WONG CHUNG LAI FRANK	黃仲澧
407	LEE YIK KI	李翊淇
408	YUE LIT FUNG OWEN	余烈鋒
409	MORKEL ANDRE DAVID	
410	TAM RAYMONDCHI HO	譚志豪
411	NG KUN FUNG MATTHEW	吳灌峰
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413	LEUNG KAM SHING	梁錦誠
414	LEE WAI LAM LIRIVS	李偉臨
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418	TANG HO KIU HOWARD	鄧顥翹
419	LIU WAI SHUEN	廖慧旋
420	TANG LONG YING	鄧朗盈
421	TAM WAI YEE	譚卉怡
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423	CHAN SANDY SIN TING	陳倩庭
424	YU TZE YAN AMANDA	余芷欽

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