

Sustainable Lantau Blueprint

June 2017





Balancing Development & Conservation

A continuation of the guiding principle of 2007 Revised Concept Plan for Lantau

FOREWORD



As Hong Kong grows, there are great challenges ahead in meeting development needs whilst responding to the societal aspirations for a sustainable and quality living. Under the on-going study on “Hong Kong 2030+: Towards a Planning Vision and Strategy Transcending 2030” which aims to examine the strategies and feasible options for

the overall spatial planning, as well as land infrastructure development for Hong Kong beyond 2030, Lantau commands an unparalleled strategic position in the overall development of the territory.

Having one of the busiest airports in the world and the Hong Kong-Zhuhai-Macao Bridge strengthening the physical and functional integration with the thriving Greater Pearl River Delta, Lantau is essentially Hong Kong’s international and regional gateway to the world and the Greater Pearl River Delta. Leveraging on the cross-boundary transport network in promoting regional economic and social development in the Guangdong-Hong Kong-Macao Bay Area, which comprises nine cities in Guangdong Province and the two Special Administrative Regions of Hong Kong and Macao, Hong Kong’s status as international financial, transportation and trade centres could be further enhanced and the development of financing services, business and commerce, logistics, professional services, innovation and technology industry, tourism, etc. could be promoted.

Lantau also has rich cultural heritage, extensive country parks, well-preserved religious traditions, fascinating tourist attractions and a vibrant new town. With vast diversity at such a strategic location, Lantau provides tremendous opportunities for strategic economic and housing development at the northern shore and conservation of natural and cultural resources with some sustainable tourism and recreation uses at predominant part of Lantau for the long-term sustainable growth of Hong Kong.

In collaboration with the Lantau Development Advisory Committee (LanDAC) and taking into account public's view gathered during the public engagement exercise carried out between January and April 2016, a Sustainable Lantau Blueprint guiding the future development and conservation for Lantau is formulated.

Following the overarching planning vision during the formulation of the Concept Plan and Revised Concept Plan for Lantau in 2004 and 2007 respectively, a balanced development and conservation approach has been carried forward by LanDAC for Lantau. We understand through the public engagement that the public generally support the balanced approach. This will be followed as the preamble towards our planning and development of a sustainable Lantau ahead.

We thank LanDAC members for their time and efforts in providing invaluable advice, formulating the vision and planning principles as well as shaping various development and conservation initiatives.

In the time ahead, we will continue to communicate and collaborate with stakeholders and the public in delivering individual projects under the Blueprint. Let's shape a sustainable Lantau.

A handwritten signature in black ink, appearing to read 'Eric Ma', with a long horizontal flourish extending to the right.

MA Siu-cheung, Eric
Secretary for Development

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1. DEVELOPMENT CONTEXT

1.1 Background

Lantau is the largest island in Hong Kong. It was once a remote area with a few villages. The epoch-making relocation of the Hong Kong International Airport (HKIA) to Chek Lap Kok in the 1990s is a watershed in the history of Lantau. The transport network brought forth by the Airport Core Programme projects has triggered the development of the northern Lantau into a strategic economic corridor anchoring onto the aviation and logistics industries with supporting new town and tourism facilities, such as Ngong Ping Cable Car System and Hong Kong Disneyland Resort, while the rest of the area remains natural.

Sensitive terrestrial and marine habitats with high landscape and scenic value and rich diversity of flora and fauna are found in Lantau. Lantau also possesses a wealth of cultural heritage, for example, the Rock Carving at Shek Pik which is a declared monument, the Dragon Boat Water Parade in Tai O which is included in the list of China's national intangible culture heritage and the renowned Po Lin Monastery.

Lantau has been evolving into a place of diversity with rich cultural heritage, extensive country parks, well-preserved traditions, fascinating entertainment attractions and a vibrant new town (Figure 1).

The Concept Plan for Lantau was formulated in 2004 and updated in 2007 (Figure 2) to provide a planning and development framework to promote sustainable development by balancing development and conservation needs. Development is focused in the north whereas the rest of Lantau is for nature conservation and environmentally sustainable recreation and visitor uses. A number of proposals in the Concept Plan have been taken forward, for example, improvement works for rural villages, designation of the Lantau North (Extension) Country Park and provision of walking trails, mountain bike trails and cycle tracks.

With a view to capitalising the opportunities brought by the Hong Kong-Zhuhai-Macao Bridge (HZMB) and Tuen Mun-Chek Lap Kok Link (TM-CLKL) and the new position of Lantau in the Greater Pearl River Delta (PRD) after completion of these major transport infrastructures, there is a need to formulate the Sustainable Lantau Blueprint as an update to and continuation on the previous Concept Plan to cater for the sustainable development of Lantau as well as to present the changing role of Lantau in Hong Kong.

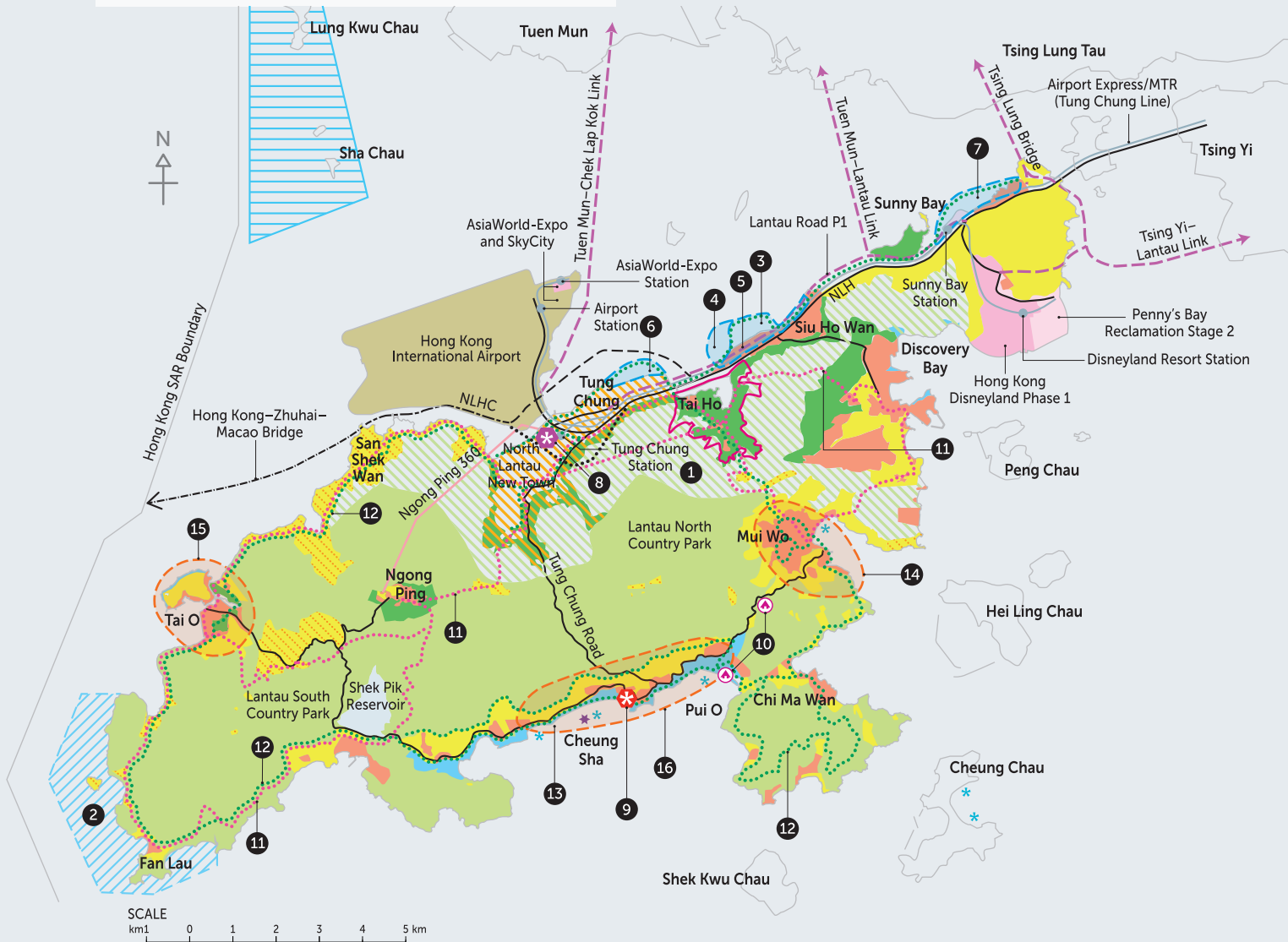
FIGURE 1
Existing Conditions of Lantau



— Major Road (Existing/Under Construction)
— Closed Road

Aerial Photograph from Lands Department
Three-Runway System Layout from Airport Authority Hong Kong

FIGURE 2
2007 Revised Concept Plan for Lantau



SCALE
km 1 0 1 2 3 4 5

- Existing/Planned Tourism Development & Infrastructure
- Airport & Related Development
- New Town Development
- Existing Country Park
- Existing Marine Park
- Tai Ho Priority Site for Enhanced Conservation under New Nature Conservation Policy
- Conservation Area
- Coastal Protection Area
- Green Belt
- Countryside Area
- Developed Area

- * Gazetted Beach
- Existing/Committed Road Alignment
- Existing/Committed Rail Alignment & Station
- Possible Road Projects under Consideration
- Hong Kong Section of Hong Kong-Zhuhai-Macao Bridge
- North Lantau Highway Connection (Western Section)
- Different Possible Alignments for North Lantau Highway Connection (Eastern Section)
- NLH North Lantau Highway
- NLHC North Lantau Highway Connection

Conceptual Proposals

- ① Lantau North (Extension) Country Park
- ② South West Lantau Marine Park
- ③ Lantau Logistics Park (LLP)
- ④ Possible LLP Extension or Other Compatible Uses
- ⑤ Cross Boundary Transport Hub
- ⑥ Possible Theme Park/Major Recreational Uses
- ⑦ Leisure and Entertainment Node
- ⑧ Museum
- ⑨ Resort
- ⑩ Camp Site
- ⑪ Eco/Heritage Trail and Country Trail
- ⑫ Cycle Track and Mountain Bike Trail
- ⑬ Triathlon Race Course
- ⑭ Facelift of Mui Wo
- ⑮ Improvement Works at Tai O
- ⑯ Beachfront Enhancement of South Lantau Coast

1.2 The Changes

Since the promulgation of the 2007 Revised Concept Plan for Lantau, a number of major infrastructure and development projects have been progressively planned with some being implemented to complement the HKIA and realise the development potential so created. They are the HZMB, TM-CLKL, the Topside Development at Hong Kong Boundary Crossing Facilities Island (Topside Development at HKBCF Island), North Commercial District (NCD) on Airport Island (now referred to as the SKYCITY), Tung Chung New Town Extension (TCNTE), Siu Ho Wan development and the HKIA Three-Runway System (3RS) etc. These strategic infrastructures and development projects have brought forth great challenges as well as opportunities.

1.2.1 An International and Regional Double Gateway

Today, Lantau is no longer a mere terminus at the west end of Hong Kong. The HKIA links some 190 destinations around the world. Most of Asia’s major commercial cities are within 4-hour flight time with the Gross Domestic Product (GDP) of these countries summed up to about US\$20 trillion¹, while about half of the world’s population is reached within 5-hour flight time (Figure 3A). Together with the expansion of the HKIA into 3RS, Lantau will be strengthened as an international and regional transport hub in the Greater PRD.



¹ Reference source: World Bank 2015.

In the regional context, the Guangdong-Hong Kong-Macao Bay Area (the Bay Area), which comprises nine cities in Guangdong Province and the two Special Administrative Regions of Hong Kong and Macao, has an increasingly comprehensive railway, high-speed rail, highway, air and sea transport network, facilitating the smooth flow of people, goods, technology, etc. in the Bay Area. With the commissioning of HZMB and other cross-boundary infrastructure facilities, Hong Kong can fully leverage the cross-boundary transport network in promoting regional economic and social development, which will in turn consolidate and enhance its status as international financial, transportation and trade centres, and promote the development of financing services, business and commerce, logistics, professional services, innovation and technology industry, tourism, etc.

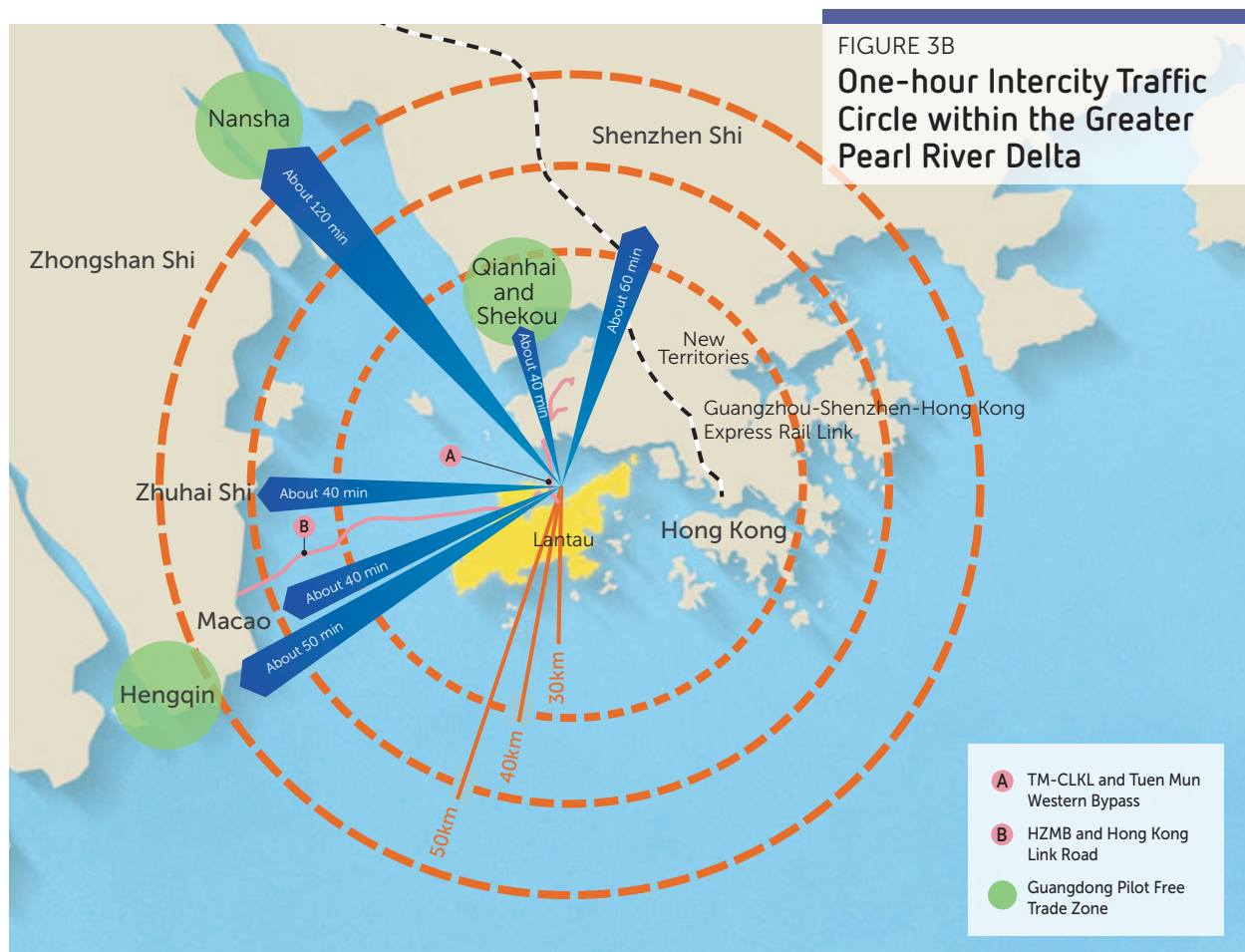
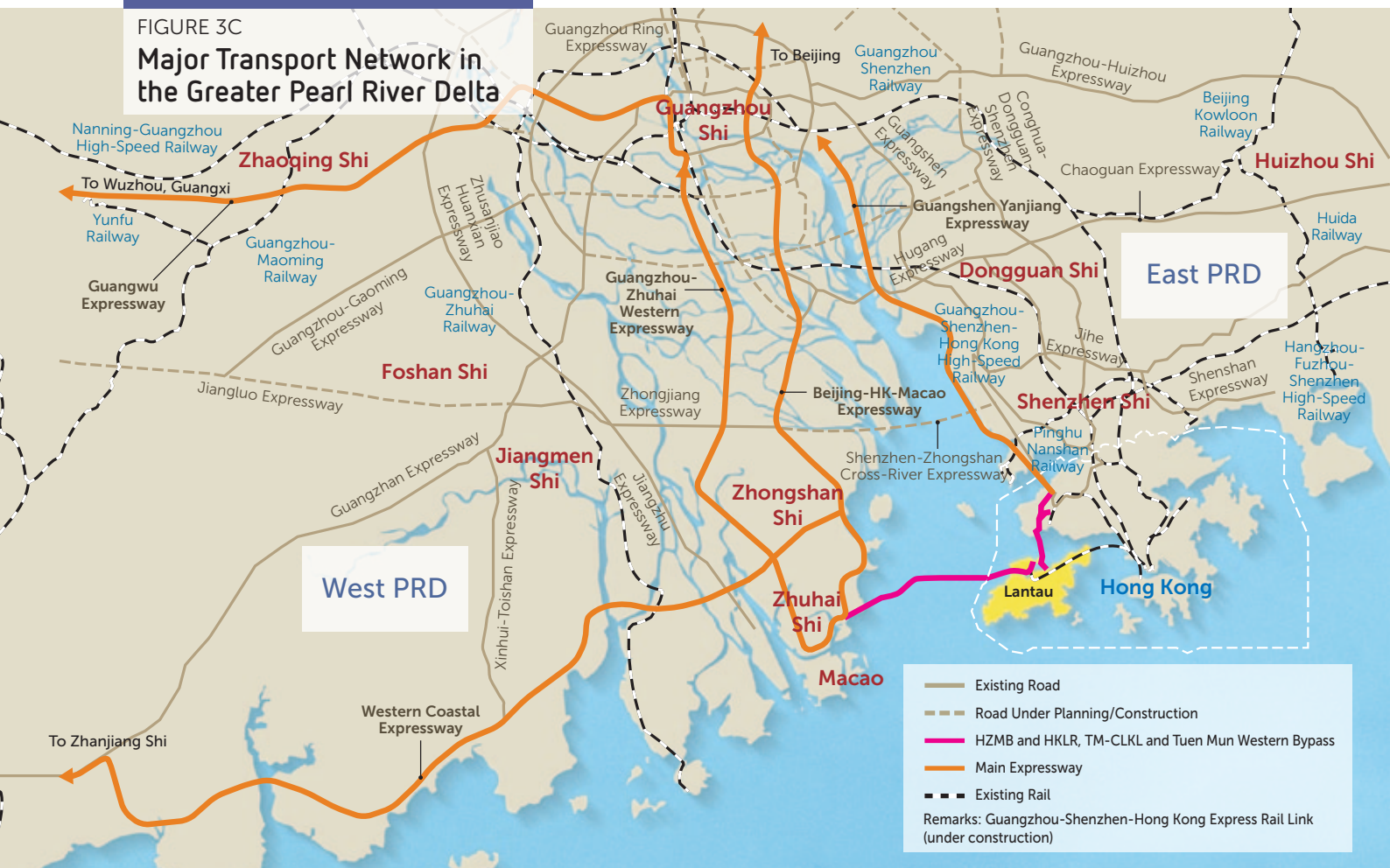


FIGURE 3C
Major Transport Network in the Greater Pearl River Delta



The connection between Hong Kong and other cities in the Greater PRD is getting closer. Lantau’s “One-hour Intercity Traffic Circle” will cover Shenzhen to the north, and Macao and Zhuhai to the west. If threshold is extended to two hours, all the three areas in the Guangdong Pilot Free Trade Zone, namely, Qianhai and Shekou, Nansha and Hengqin, could be reached. If the traffic circle is slightly enlarged, most PRD cities can be reachable in two to three hours. Lantau will become an important gateway to the Greater PRD, one of the fastest growing economic regions in the world (Figure 3B). The PRD and Macao have a population of about 60 million and an economy of over US\$900 billion in GDP². When the HZMB, TM-CLKL and HKIA 3RS are in place, there will be fundamental change to Lantau from a west end to a “Double Gateway” connecting Hong Kong to the world and Greater PRD (Figure 3C).

2 Reference sources: (1) The Guangdong Statistical Yearbook 2016 by Guangdong Statistical Bureau, (2) The Year Book of Statistics 2015 by Statistics and Census Service of the Government of Macao Special Administrative Region.

1.2.2 Opportunities for Bridgehead Economy

Being a strategic “Double Gateway” and confluence of the Bay Area intercity transport network, Lantau is the key node where international, regional and local visitors, talents and goods flow and converge. Leveraging on the locational advantage, there presents opportunities for new business platforms at the bridgehead location by developing various commercial spaces, ancillary and supporting facilities. Development of “bridgehead economy” and expansion of tourist attractions at this strategic location would result in major change to the strategic positioning and function of Lantau, particularly the northern corridor.

1.2.3 Long-term development needs of Hong Kong

The “Hong Kong 2030+: Towards a Planning Vision and Strategy Transcending 2030” (Hong Kong 2030+) has examined the economic and social development needs of Hong Kong. It has concluded that more land supply is needed for housing our growing population in better living quality and for accommodating necessary supporting infrastructures, utilities, open space, and government, community and recreational facilities, as well as various economic activities in order to support Hong Kong’s sustainable development. Commanding a strategic location, Lantau offers development opportunities and helps achieve a more balanced spatial development pattern for the territory.

1.3 Lantau Development Advisory Committee (LanDAC) and Public Engagement (PE)

LanDAC was established in 2014 to advise on the social and economic development opportunities in Lantau to capitalise on its advantages as the confluence of major transport infrastructures linking Hong Kong, Macao and the western PRD, so as to meet the long-term development needs of Hong Kong, and the policies, measures and specific proposals conducive to the sustainable development and conservation of Lantau.

While exploring the development potential of Lantau, LanDAC followed the guiding principle of balanced development and conservation in formulating the proposed planning vision, strategic positioning and planning principles for the planning and development framework of Lantau. The First-term Work Report namely “Space for All” issued in January 2016 summarised the deliberations and proposals put forth by LanDAC, which is available at LanDAC’s website: <http://www.landac.hk/en>.

To gauge public views on the development framework and proposals for Lantau, a three-month PE exercise was conducted between January and April 2016. The public views have been duly considered in further developing the proposals and incorporated as appropriate into the Sustainable Lantau Blueprint, which sets out an updated planning and development framework for Lantau. The PE Report was issued on 5 November 2016 and is available at LanDAC’s website: <http://www.landac.hk/en/engagement-activities>.

1.4 Hong Kong 2030+: Towards a Planning Vision and Strategy Transcending 2030

The Government is updating the territorial development strategy (i.e. “Hong Kong 2030: Planning Vision and Strategy” promulgated in 2007) to guide the future planning, land and infrastructure development and the shaping of the built environment of Hong Kong beyond 2030.

Based on the latest population forecast, the anticipated demand and foreseen circumstances for housing, economic uses, government, institution or community (GIC) uses, open space and transport facilities, the existing, committed and planned developments, and redevelopment of existing built-up areas, there is an anticipated land shortfall of at least 1,200 ha in the long run against the estimated land requirement.

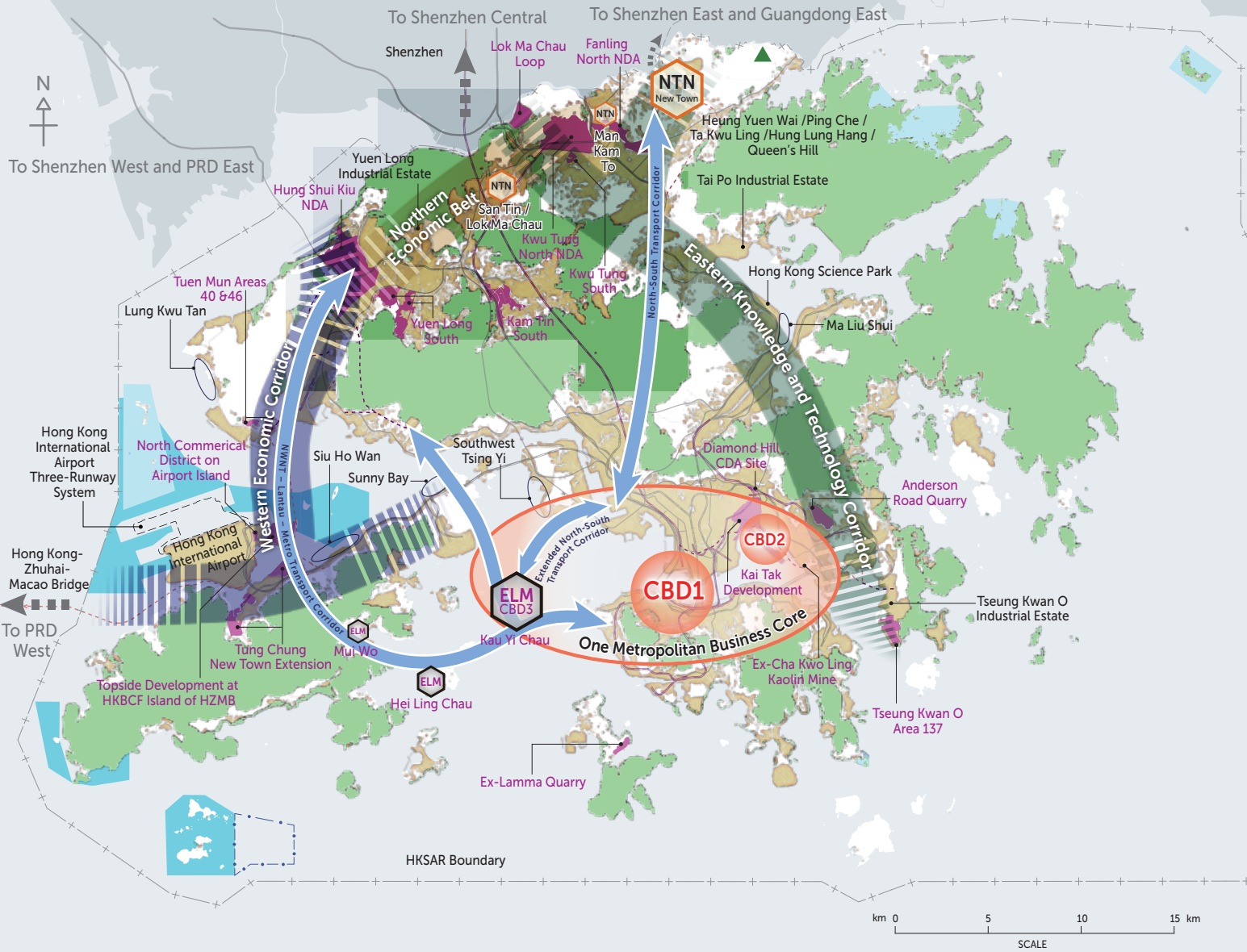
To plan in advance, Hong Kong 2030+ has proposed a conceptual spatial framework to optimise the locational advantages for different sectors/economies, the distribution of population and employment, and capacity of transport network, infrastructure and environment for a sustainable, efficient and cost-effective development pattern (Figure 4). Further details are available at the Hong Kong 2030+ study website: www.hk2030plus.hk.

The proposed planning and development framework for Lantau will contribute to the overall strategy formulated under Hong Kong 2030+ through:

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

The 6-month public engagement for Hong Kong 2030+ ended in April 2017. The whole study is scheduled for completion in 2018.

FIGURE 4
**Conceptual Spatial Framework of “Hong Kong 2030+:
 Towards a Planning Vision and Strategy Transcending 2030”**



	East Lantau Metropolis (ELM) Preliminary Concept		Existing Built-up Area
	New Territories North (NTN) Preliminary Concept		Existing Conservation Area
	Proposed Transport Corridors (subject to further study)		Proposed Country Park
	Potential Near-shore Reclamation Sites outside Victoria Harbour		Existing Transport Network
	Existing/Proposed Marine Parks or Marine Reserve		Railway Projects under Construction / Planning (indicative alignment)
	Draft Boundary of the Proposed Marine Park for the IWMF Phase 1 (subject to amendment)		Road Projects under Construction
	Major Committed / Under Planning Land Supply*		Road Projects under Planning (indicative alignment)

Remarks: The boundaries of the land supply sites and alignments of the transport links under planning are indicative only.

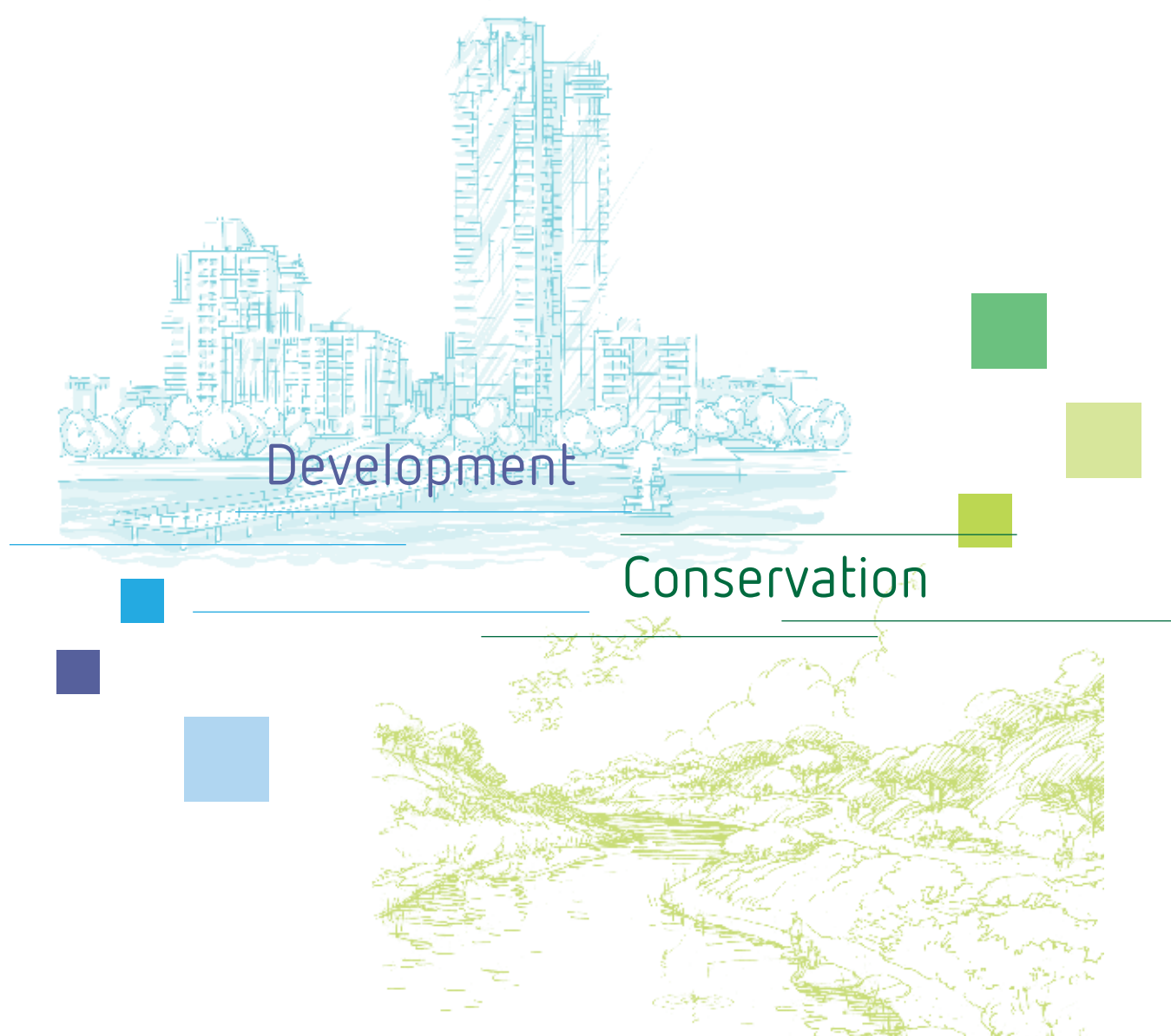
* Major Committed / Under Planning Land Supply includes:
 Kai Tak Development, North Commercial District on Airport Island, Tung Chung New Town Extension, Topside Development at HKBCF Island of HZMB, Yuen Long South, Hung Shui Kiu NDA, Kam Tin South, Lok Ma Chau Loop, Kwu Tung North NDA, Fanling North NDA, Anderson Road Quarry, Diamond Hill CDA Site, Ex-Lamma Quarry, Ex-Cha Kwo Ling Kaolin Mine, Tuen Mun Areas 40 & 46, Kwu Tung South and Tseung Kwan O Area 137

2. VISION, STRATEGIC POSITIONING AND MAJOR PLANNING PRINCIPLES

Under the advice of LanDAC, the vision, strategic positioning and major planning principles for Lantau as specified below have been established. As revealed in the PE Report, they are generally supported by the public.

2.1 Vision

To capitalise on the diversity of opportunities for development and conservation, the planning vision for Lantau is “balancing development and conservation”, with a view to developing Lantau into a smart and low-carbon community for living, work, business, leisure and study. This will benefit Hong Kong people by providing new opportunities associated with land and housing supply, economic development, commerce and trade, leisure, recreation and tourism, and at the same time enhancing the conservation of our natural, cultural and heritage resources.



2.2 Strategic Positioning

Taking the advantages brought forth by its strategic location in Greater PRD and the development of strategic air, road and railway infrastructures, Lantau is strategically positioned as:

2.2.1 An International Transport, Logistics and Trade Hub in the Greater PRD

Upon commissioning of 3RS, the HKIA's role as the leading international aviation hub in the Greater PRD will be further strengthened. Together with the HZMB and TM-CLKL, Lantau will become Hong Kong's "Double Gateway" to the world and Greater PRD. The advantages of Lantau in respect of transport infrastructures can be leveraged to further enhance the connections between Hong Kong and the Mainland as well as the rest of the world.

2.2.2 A Service Hub of the Greater PRD and Asia

Capitalising on the connectivity edge with major international and PRD cities, Hong Kong can enhance its provision of quality professional and advanced producer services of international standards, such as legal, financial and other professional services, to support the expansion of businesses in the Mainland and Asia, and in turn facilitate further development of Hong Kong into a one-stop, high-value modern service hub.

2.2.3 A Strategic Growth Area with a New Metropolis

The proposed ELM in the waters between Lantau and Hong Kong Island can become a SGA and has the potential to be developed into an extended urban core accommodating a population of 400,000 to 700,000, as well as the CBD3 of Hong Kong. The CBD3 can be positioned as a new and smart financial and producer services hub to boost our economic development, provide a large number of employment opportunities, and lead to a more balanced development pattern in Hong Kong.

2.2.4 A Treasure of Natural and Cultural Assets

Lantau has a rich array of flora and fauna. About 70% of Lantau has been designated as country parks and well conserved. The vast natural assets could also be, where appropriate, better harnessed for public enjoyment. The villages in Lantau with monuments and religious traditions are important cultural elements. These natural and cultural assets, together with other diverse recreation and tourism facilities, will create synergy in providing visitors with a wide range of leisure, recreation and entertainment experience.

2.3 Major Planning Principles

There are four major planning principles guiding the planning and development of Lantau:

2.3.1 Economy and Livelihood

The following three economic development concepts should be applied to the planning of the major commercial developments in the North Lantau as well as the future SGA:

- (i) **“A New Platform for the Pillars”** – to develop Lantau into a platform for the continued growth and development of pillar industries in Hong Kong³, enabling it to embrace the opportunities brought by the Greater PRD.
- (ii) **“A Thriving Community”** – to develop healthy, sustainable, diverse and vibrant communities supported by suitable developments and a wide variety of job opportunities, which will shape Lantau as a place for living, work, business, leisure and study.
- (iii) **“A Bridge to Tomorrow”** – to promote Lantau as an event space to showcase Hong Kong and its innovative potential to the world and give priority to knowledge-based industries, smart living and businesses, and innovative tourism product.

2.3.2 Nature and Cultural Conservation

There are sites of natural and cultural heritage importance, particularly in the rural areas of Lantau. They should be conserved. Major developments should be avoided at these sites and their surrounding areas wherever possible. Moreover, the conservation effort should be strengthened. The conservation resources, where appropriate, should be utilised for releasing their potential for education, eco-recreation and eco-tourism. Suitable sites should be linked with improved accessibility to facilitate visits and enjoyment of the locals and visitors.

2.3.3 Recreation and Tourism

Lantau possesses rich assets for recreation and tourism purposes, which can meet the ever-increasing needs for leisure, recreation and entertainment. Diversified recreation and tourism facilities should be developed to shape Lantau as a kaleidoscopic leisure and recreation destination.

2.3.4 Traffic and Transport

A traffic and transport infrastructure network should be planned and implemented in a timely manner in support of development and conservation initiatives for Lantau. It is proposed that traffic and transport should be the priority consideration for the implementation of various developments. Besides, green transport will be encouraged for sustaining low-carbon footprint.

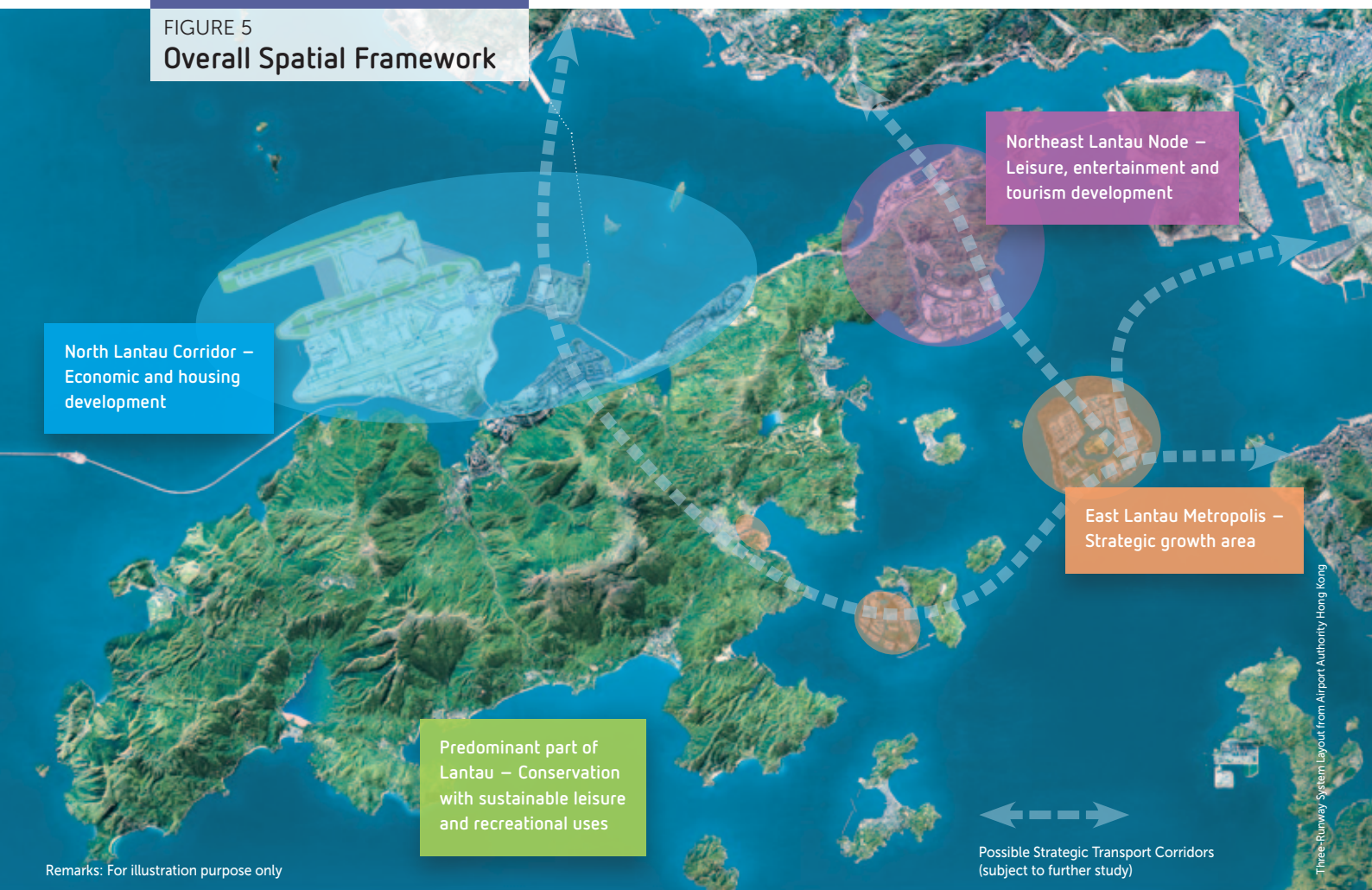
³ The four pillar industries of Hong Kong are financial services, tourism, trading and logistics, and professional and producer services.

3. THE BLUEPRINT

3.1 Spatial Planning and Development Framework – North and South

The Blueprint embraces the overarching principle of “Development in the North; Conservation for the South”, which is well received in the PE exercise. North Lantau will be the new economic platform of Hong Kong attracting local, regional and international business and visitors, and at the same time providing local residents with diversified opportunities for living, work, business, leisure and study. While the predominant part of Lantau, in particular the South Lantau, would be conserved for its natural and cultural resources, unique rural settlements would also be preserved and enhanced. Where appropriate, low-impact leisure and recreational uses would be developed for public enjoyment (Figures 5 and 6).

FIGURE 5
Overall Spatial Framework



3. THE BLUEPRINT



FIGURE 6

Sustainable Lantau Blueprint



Proposed Projects

- A** Topside Development at Hong Kong Boundary Crossing Facilities Island
- B** Tung Chung New Town Extension
- C** Siu Ho Wan Development
- D** Northeast Lantau Tourism Gateway at Sunny Bay
- E** Hong Kong Disneyland Resort Further Development
- F** East Lantau Metropolis
- G** North Commercial District on Airport Island (under planning)

← Possible Strategic Transport Corridors (subject to further study)

■ Proposed Development Area

Conservation Initiatives

- C1** Conservation of Pui O Wetland
- C2** Conservation of Mudflat and Sandflat Habitats
- C3** Tung Chung River Park
- C4** Tai O Nature and Cultural Heritage District
- C5** Conservation of Tai Ho Valley
- C6** Lantau Exhibition Centre on Nature and Cultural Heritage
- C7** Tung Chung Nature and Cultural Heritage Trail
- C8** Preservation of Declared Monuments
- C9** Improvement to Rural Environment

Leisure and Recreational Activities

- R1** Mountain Bike Training Ground
- R2** Camping Grounds
- R3** Water Sports Centre
- R4** Beach Volley Ball Court
- R5** Flowers/Trees Appreciation

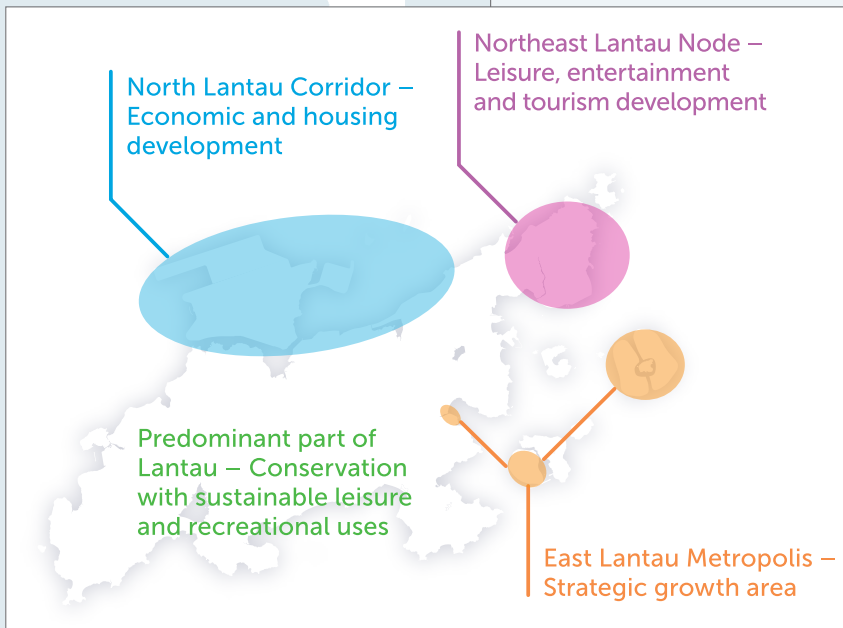
Traffic and Transport Infrastructures

- Existing Road
- Major Road Under Construction
- Existing Rail
- Proposed Rail
- Possible New Railway Station

Note: The Siu Ho Wan railway station is proposed by MTRCL

- Built-up Area
- Other Rural Area
- Existing/Proposed Marine Park
- Country Park
- SSSI
- Conservation-related Zonings on Statutory Plans (Coastal Protection Area, Conservation Area, Green Belt)
- Eco-shoreline
- Hiking Trail
- Existing Cycle Track and Mountain Bike Trail
- Proposed Cycle Track and Mountain Bike Trail

Note: The 8 SSSIs on Lantau do not include Sunshine Island and Sha Chau



Development in the North

North Lantau and East Lantau
Metropolis for economic,
housing and entertainment
development

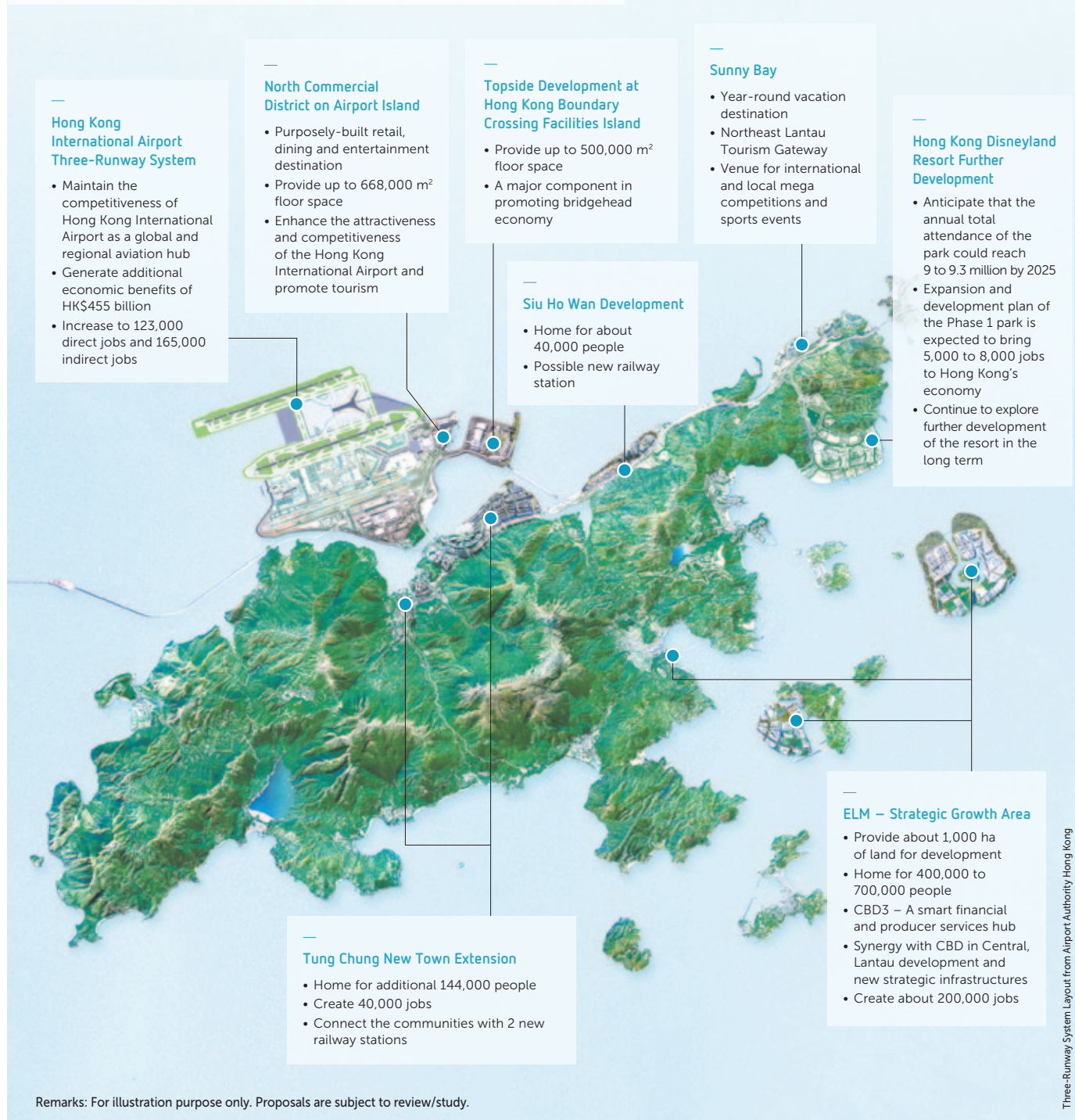


Opportunities
and
quality living

3.2 Development in the North

To meet the long-term sustainable growth of Hong Kong, major housing, economic, leisure, entertainment and tourism developments are planned in North Lantau and the ELM (Figure 7). Details of these major development proposals are set out below.

FIGURE 7
Major Development Opportunities in North Lantau



3.2.1 North Lantau Corridor for Economic and Housing Development

Economic and housing proposals are planned aside with existing developments along the North Lantau Corridor to form a critical mass to promote agglomeration economies and accelerate the overall economic development of Hong Kong. There are four key projects in this Corridor.

(i) North Commercial District on Airport Island

Tapping into the full potential brought by the HZMB, TM-CLKL and the HKIA 3RS, the Airport Authority Hong Kong has announced its plan for SKYCITY with a strategy to expand and transform HKIA into an airport city. The proposal will feature retail complexes, entertainment facilities, dining space, hotels, and office towers in an approximately 25 ha of land at the north of the Airport Island. The total floor space of the development is up to 668,000 m². It will be developed in phases. Phase 1 of the project will comprise a hotel providing 450 to 750 rooms, expected to be completed in 2020; and a unique retail, dining and entertainment (RDE) destination of 195,000 m² floor space, scheduled to open in 2021.



(ii) Topside Development at HKBCF Island of HZMB

The HKBCF Island of HZMB with an area of about 150 ha (including 20 ha for TM-CLKL Southern Landfall) is at a strategic location of about 1 km away from the HKIA, and has convenient transport connection to North Lantau and Tuen Mun via TM-CLKL. With an initial development theme of “the World Converging”, the Topside Development at HKBCF Island would create an international and regional gateway where convergence of people, innovation and goods would provide opportunities for developing bridgehead economy, creating a platform for exchanging and promoting ideas as well as showcasing new technology. Subject to the satisfactory resolution of technical issues, the Topside Development at HKBCF Island could provide up to 500,000 m² floor space.

(iii) Tung Chung New Town Extension

Tung Chung New Town and its extension would be developed as a balanced community and provide a wide range of supporting services to HKIA. According to the TCNTE Study, Tung Chung East will be used for comprehensive housing and commercial development while Tung Chung West will be for low-density development in order to preserve its rural character. The metro core area in Tung Chung East would be developed with a smart business node to cater for local needs and provide support to the economic development of Lantau. Offices of various scales could be developed, alongside RDE facilities. A vegetated knoll in between Tung Chung West and Tung Chung Town Centre which offers excellent views over Tung Chung Bay and towards country park would be developed into the Tung Chung Town Park with a view to enhancing living quality and walkability of the new town. Through new, innovative and environmentally-friendly smart building design, TCNTE could provide smart urban experience and develop as a balanced and vibrant community. It is expected that the future population of the whole Tung Chung New Town will reach about 270,000. The overall extension project will provide over 800,000 m² of commercial floor space for regional office hub, retail and hotel development, with the capacity of creating about 40,000 jobs (Figures 8A and 8B).

FIGURE 8A
Tung Chung East



FIGURE 8B

Tung Chung West



(iv) Siu Ho Wan Development

The Government is actively exploring with the Mass Transit Railway Corporation Limited (MTRCL) the development potential of stations and related sites along existing and future rail lines. Siu Wo Wan Depot has an area of about 30 ha. MTRCL is currently studying the feasibility, planning layout and impacts of the topside residential development thereon. Neighbouring Tung Chung, Siu Ho Wan could be developed as a new community of a population of about 40,000. Besides, it has been identified as a potential near-shore reclamation site under the Study on “Enhancing Land Supply Strategy: Reclamation Outside Victoria Harbour and Rock Cavern Development”. We will study the feasibility of the proposed reclamation at Siu Ho Wan and explore the land uses, including training and education facilities, as supporter of economic growth, to achieve the best synergy with the developments at North Lantau.



3.2.2 Northeast Lantau Node for Leisure, Entertainment and Tourism Development

Establishment of new entertainment and tourist attractions, themed hotels, RDE facilities, leisure and recreational activities and promotion of smart and innovative travel experience will be explored at the Northeast Lantau Node, particularly the possible Sunny Bay reclamation. They would be packaged so as to provide visitors with convenient access to a range of activities that can work in synergy with each other to increase the attractiveness of the location, thus encouraging a longer stay of holiday seekers. With the existing and potential developments, the node has a potential of becoming an ultimate year-round international tourist and local vacation destination.

(i) Northeast Lantau Tourism Gateway

In view of its close proximity to the Hong Kong Disneyland Resort and its accessibility via railway and road networks, the Sunny Bay reclamation has been positioned as the “Northeast Lantau Tourism Gateway”. It could be planned and developed into a converging point for leisure, sports, recreation, entertainment and tourism activities to achieve synergy with the further development of the Hong Kong Disneyland Resort and other major developments in North Lantau.

There is a strong demand on leisure boats for marine recreation activities in recent years. More marinas/mooring facilities for leisure boats in the Lantau waters would be planned. In addition to the marina proposed in TCNTE project, which can accommodate about 90 leisure boats subject to further detailed assessment, the opportunities of providing space for leisure fishing and mooring facilities for leisure boats would also be explored at Sunny Bay in order to enhance its role of being a tourism gateway.

Currently, several local mega sports events such as Triathlon, Hong Kong Road Cycling Race and TransLantau100 are being organised in Lantau. The Government will explore the possibility of providing facilities in North Lantau, particularly in Sunny Bay, to facilitate organisation of more international and local mega competitions and sports events.



(ii) Hong Kong Disneyland Resort Further Development

Opened in 2005, Hong Kong Disneyland Resort is a major component of the tourism infrastructure in Hong Kong, drawing visitors from all over the world. In November 2016, the expansion and development plan of Hong Kong Disneyland Resort was announced, which would launch a series of new offerings and attractions in the theme park from 2018 to 2023. The expansion and development plan is expected to bring around 5,000 to 8,000 jobs to Hong Kong’s economy. The annual total attendance of the theme park is anticipated to reach 9 to 9.3 million by 2025. The Government will continue to explore with The Walt Disney Company the resort’s long-term development.

3.2.3 East Lantau Metropolis as Long-term Strategic Growth Area

The proposal of the ELM was evolved from the proposal of artificial islands at the Central Waters put forward under the study on “Enhancing Land Supply Strategy: Reclamation Outside Victoria Harbour and Rock Cavern Development” commenced in 2011 for increasing land supply in Hong Kong beyond 2030.

As identified under the Hong Kong 2030+, there is a shortfall of land to sustain the long-term social and economic developments in the territory. New SGAs would need to be planned in a timely manner to address the shortfall. The proposed ELM is identified as one of the SGAs. It will be an important source of land supply to meet the shortfall of housing and economic land, including premier Grade A offices, associated GIC facilities as well as open space, and to provide space for provision of infrastructure link in support of the SGA and the territorial development.

As compared with the waters in the East and the West, the Central Waters are relatively less ecologically sensitive and have potential for providing sizeable reclaimed land. The basic concept of the ELM is to create artificial islands by reclamation near Kau Yi Chau and at Hei Ling Chau Typhoon Shelter as well as making better use of the under-utilised land in Mui Wo. It is aimed to create a smart and low-carbon development cluster.

Being about 4 km away from Hong Kong Island West, the ELM could efficiently connect with the existing CBD along both sides of the Victoria Harbour to form an extended urban core in the long term. The CBD3 at the ELM may offer smart, innovative and quality premises, creating a financial and producer services hub which is strongly tied with the airport, and reinforce Hong Kong’s connector function in the region.

The CBD3 could complement the traditional CBD in the Central and the CBD2 at Kowloon East, and which altogether will form as a “Metropolitan Business Core” of Hong Kong in the long term. This new metro front could help create a more balanced development pattern in Hong Kong. The new strategic infrastructure would provide alternative transport route to Lantau and enhance connectivity to the airport.

Based on preliminary estimates, the potential developable area of the ELM is about 1,000 ha which will have a potential to accommodate a population ranging from about 400,000 to 700,000 and create employment opportunities of about 200,000. The initial estimates are based on the new town model and the existing CBDs, with due consideration of the housing and CBD Grade A office requirements to sustain Hong Kong’s long-term development, the critical mass in population, economic activities and jobs required to trigger and sustain the proposed railway and road networks, to create efficiency, economies of scale and synergy effect. The technical feasibility (including potential environmental impacts to the surrounding areas, development scale, parameters and phasing) of the proposed ELM is subject to detailed studies.

3.2.4 Social Development

To achieve a sustainable development, a blissful living environment with supporting facilities is essential for the community. Sufficient education, health, leisure, recreation and community facilities and quality open space should be planned in a holistic approach for achieving a liveable community.

(i) Population and Employment Opportunities

The population of Lantau is around 110,000 in 2016, and mostly concentrated in Tung Chung New Town, with the remaining in Discovery Bay, Mui Wo, Tai O and villages in South Lantau. With the developments of TCNTE and Siu Ho Wan, it is anticipated that the population of Lantau would be about 300,000 by 2030. When the ELM is in place, the total population of Lantau could be about 0.7 to 1 million. In terms of employment, the existing employment opportunities in Lantau are about 100,000, including 73,000 at the HKIA. With implementation of the development proposals in Lantau, the total employment opportunities could reach 470,000 in the long term⁴. The developments in Lantau would not only bring jobs closer to home of our future population, lessen the burden on transport infrastructures, minimise the time and distance on commuting, but also achieve a more balanced spatial development pattern for the territory in capitalising the development advantage at the western part of Hong Kong.

(ii) Community Facilities

Coping with the growing population in Lantau, the Government would endeavour to enhance the existing community facilities as well as education facilities and services in tandem. This is not only to cater for the needs of the increasing population, but also to tie in with the pace of development to attract talent and families with children to live in Lantau.



⁴ For broad reference, according to the data of 2011 Hong Kong Population Census, the working population by place of work in Central and Western District was about 345,000.

3.2.5 Smart and Low Carbon Community

To promote a low-carbon lifestyle in Hong Kong under the context of combating climate change is one of the initiatives in 2016 Policy Address. Following the recommendations made by LanDAC in its First-term Work Report, the Government targets to develop Lantau into a smart and low-carbon community. During project planning and implementation, holistic urban planning approach and good urban design principles would be followed. Latest technologies together with infrastructure of high environmental quality standard would be adopted to enhance resource efficiency, reduce carbon emission and achieve sustainable living. Planned as a smart and resilient island with enhanced environmental capacity, Lantau will be a platform to showcase the innovation for quality living and working environment.

(i) Smart Technology

With a view to making Lantau a place for smart and quality living and working environment, the use of information technology in urban services and infrastructures would be promoted to enhance efficiency and provide high quality public services for making city life more convenient. For instance, the use of real-time information on vacant parking spaces could help promote convenience and efficiency. We are carrying out detailed design of TCNTE project with developing Tung Chung into a smart and green city as one of the objectives. We will promote the use of information technology to enhance smart mobility and provide an outline of the implementation framework to be taken forward by private developers in Lantau. For the longer term, the new CBD in the ELM will also be positioned as a smart and green CBD.

(ii) Low-carbon Green Community

To apply the concept of low-carbon green community in Lantau, we will encourage green building design, embed technology into urban infrastructures for reducing carbon footprint and promote green living. For instance, district cooling system will be investigated in order to reduce energy consumption in the development of TCNTE. In line with the world trend to use electric vehicles for enhancing environmental protection, the Government will explore the feasibility of using green transport in Lantau. New Lantao Bus plans to commence progressively in the Q4 of 2017 a 2-year trial of E-bus in Tung Chung area. If the trial results are satisfactory, the Government will encourage franchised bus companies to use green buses on a larger scale, taking into account the affordability of the companies and passengers. Since E-car has been encouraged in accessing South Lantau, provision of supporting facilities, such as E-car charging points in appropriate locations, would be explored.



(iii) Walkability and Mobility

To provide the community with an enhanced walking environment, good urban design principles will be embraced in comprehensive planning of the new development areas to facilitate walkability and mobility through provision of connected green spaces, cycle track, pedestrian friendly environment and promenade whenever possible. For instance, the Tung Chung Town Park, which occupies a strategic position between Tung Chung West and Tung Chung Town Centre, will be planned and developed into a town park connecting the west and the town centre of Tung Chung to facilitate a pedestrian friendly environment. Besides, a waterfront promenade extending along the coastline of Tung Chung has been planned with a view to serving as leisure walkway and jogging track for residents to encourage healthy lifestyle.

3.2.6 Optimising the Use of Government, Institution or Community Facilities and Development of Cavern

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

The Government has identified a number of Strategic Cavern Areas in Mui Wo and North Lantau (near Sham Shui Kok, Siu Ho Wan and the surrounding area of Tung Chung) under the Cavern Master Plan (Figure 9). Subject to further study, these cavern areas could be used for accommodating new or relocated existing government facilities and infrastructures, including sewerage, waste disposal systems and water supplies facilities, to release their original surface sites for more beneficial uses.

There are 10 existing correctional facilities⁵ located on government land in Lantau and Hei Ling Chau. Relocating the correctional facilities on Hei Ling Chau together with the reclamation of Hei Ling Chau Typhoon Shelter to form part of the proposed ELM will be explored. Besides, the opportunities of consolidating and relocating other correctional facilities, such as those in Tong Fuk and Chi Ma Wan, to suitable areas whilst fulfilling the operational and security requirements would be examined.

Prior to taking forward these planning ideas, the Government would carry out technical and cost-benefit studies to assess their feasibility.

⁵ The ten correctional facilities include: Shek Pik Prison, Lai Chi Rehabilitation Centre, Sha Tsui Correctional Institution in Shek Pik; Tong Fuk Correctional Institution; Chi Ma Wan Correctional Institution and Chi Sun Correctional Institution in Chi Ma Wan; and Hei Ling Chau Correctional Institution, Hei Ling Chau Addiction Treatment Centre, Lai Sun Correctional Institution and Nei Kwu Correctional Institution in Hei Ling Chau.

FIGURE 9
Strategic Cavern Areas in Lantau



Remarks: For illustration purpose only. Proposals are subject to review/study.

3.2.7 Space for Nature and Cultural Conservation in the North

While strategic development projects are planned and being developed in North Lantau, there are some initiatives that help conserve areas of ecological and cultural significance, enhance environmental capacity and contribute to the sustainability of Lantau.

(i) Conservation of Tai Ho Valley

Tai Ho is located in North Lantau fronting the North Lantau Highway. Tai Ho Stream and its surrounding valley have been identified as one of the 12 priority sites for enhanced conservation under the New Nature Conservation Policy with a view to better conserving this ecologically important site.



Tai Ho Stream is one of the few remaining medium-sized natural stream courses running continuously

from upland to a lowland estuary. The Stream, its estuary and the lower and middle reaches of the three major tributaries were designated as a Site of Special Scientific Interest (SSSI) in 1999. The SSSI supports the highest diversity of freshwater and brackish-water fish in Hong Kong.

The land side of Tai Ho forms an integral part of the natural woodlands system in the adjoining country parks. There is a wide spectrum of natural habitats including large tracts of mature woodland, fung shui woodland, shrubland, grassland, agricultural land, stream courses and coastal habitats. A high diversity of wild fauna and flora, e.g. freshwater fish, mangrove and freshwater stream, is worthy of conservation. The natural coastline comprising the estuary, shorelines and inter-tidal mudflats at Tai Ho Wan and Tai Ho Stream also constitute a significant landscape feature within the Tai Ho Valley.

Subject to further study, there is opportunity to set up an eco-tourism and education centre in the adjoining less environmentally sensitive area. The centre can help the public appreciate and enjoy the scenic view of the area, provide a platform for scientific research and promote public awareness on nature conservation.

(ii) Tung Chung River Park

The Tung Chung River and Tung Chung Valley are rich in natural and ecological resources. The endangered Romer's Tree Frog and rare Jhora Scrub Hopper have been recorded in Tung Chung Valley. Tung Chung River is one of the streams with the most abundant native freshwater fish species in Hong Kong. Species of conservation importance such as Beijiang Thick-lipped Barb and Philippine Neon Goby have been recorded in the stream and the estuary area. Downstream of the Tung Chung River is connected with the Tung Chung Bay area, where

there are abundant mudflats along the coastline supporting mangroves and other special species including horseshoe crabs, pipefishes, seahorses and seagrasses.

Tung Chung River Park is proposed with a view to enhancing the environment and allowing the public to appreciate the nature. An eco-centre is also proposed for nature education purpose. We are undertaking detailed design with a view to restoring the natural outlook of the engineered section of Tung Chung River with eco-features and preserving the rural character and features of the Tung Chung Valley in order to ensure better integration with the surroundings.



(iii) Sustainable Urban Drainage System

Respecting the high ecological value of Tung Chung River, an innovative Sustainable Urban Drainage System (SUDS) is proposed under the TCNTE project. A series of stormwater attenuation and treatment ponds is proposed to treat surface runoff collected from development areas and adjacent roads to remove pollutants from runoff before it is discharged into Tung Chung River. The wetland plants would be planted under the SUDS to help remove floating debris, provide habitats, promote biodiversity and beautify the surrounding areas. This is the pioneer system in Hong Kong with the potential for application in new development areas.

(iv) Application of Eco-shoreline

Apart from providing coastal protection, eco-shoreline could promote biodiversity in the intertidal zone of the seawall and the marine fauna. Eco-shoreline will be applied in the reclamation at Tung Chung East under the TCNTE project. Subject to further studies, it is anticipated that this concept could be extensively applied in other new reclamations.



(v) Lantau Exhibition Centre on Nature and Cultural Heritage

Besides its rich biodiversity and unique landscape character, Lantau has many sites of archaeological interest and graded historic buildings. It is also home to the early settlements of Hong Kong back to hundred years ago. An exhibition centre is proposed at Tung Chung to showcase the diversity of Lantau in history and cultural heritage as well as the natural scenery and rich biodiversity. Its location, scale, funding and mode of operation will be further examined.



(vi) Tung Chung Nature and Cultural Heritage Trail

Situated at the northern coastal area of Lantau, Tung Chung is an area with long history. It is suggested that a themed nature and cultural heritage trail be designed, with Tung Chung MTR Station as a starting point, linking up Tung Chung Fort and Tung Chung Battery (the two declared monuments), Ma Wan Chung village, Fu Tei Wan Kiln and Hau Wong Temple (Grade 2 historic building). The public could also enjoy scenic views towards nature landscape and appreciate the ecological value of areas along the trail, for example, Tung Chung River and the mangroves and mudflats at Tung Chung Bay.



(vii) Preservation of Rural Character of Ma Wan Chung

Ma Wan Chung village is an old fishing village with traditional stilt houses at the seaside. While situated in an urbanised surrounding, the village retains its old fishing culture. Community improvement works, including improvement to village drainage and sewerage system, have been proposed for improving the living environment thereat.



Further measures will be explored in collaboration with local community and stakeholders to further reinforce the characteristics of the village and improve the attractiveness of the area.

Conservation for the South

Predominant part of Lantau
for conservation with
sustainable leisure and
recreational uses



Nature
conservation,
leisure and
recreation

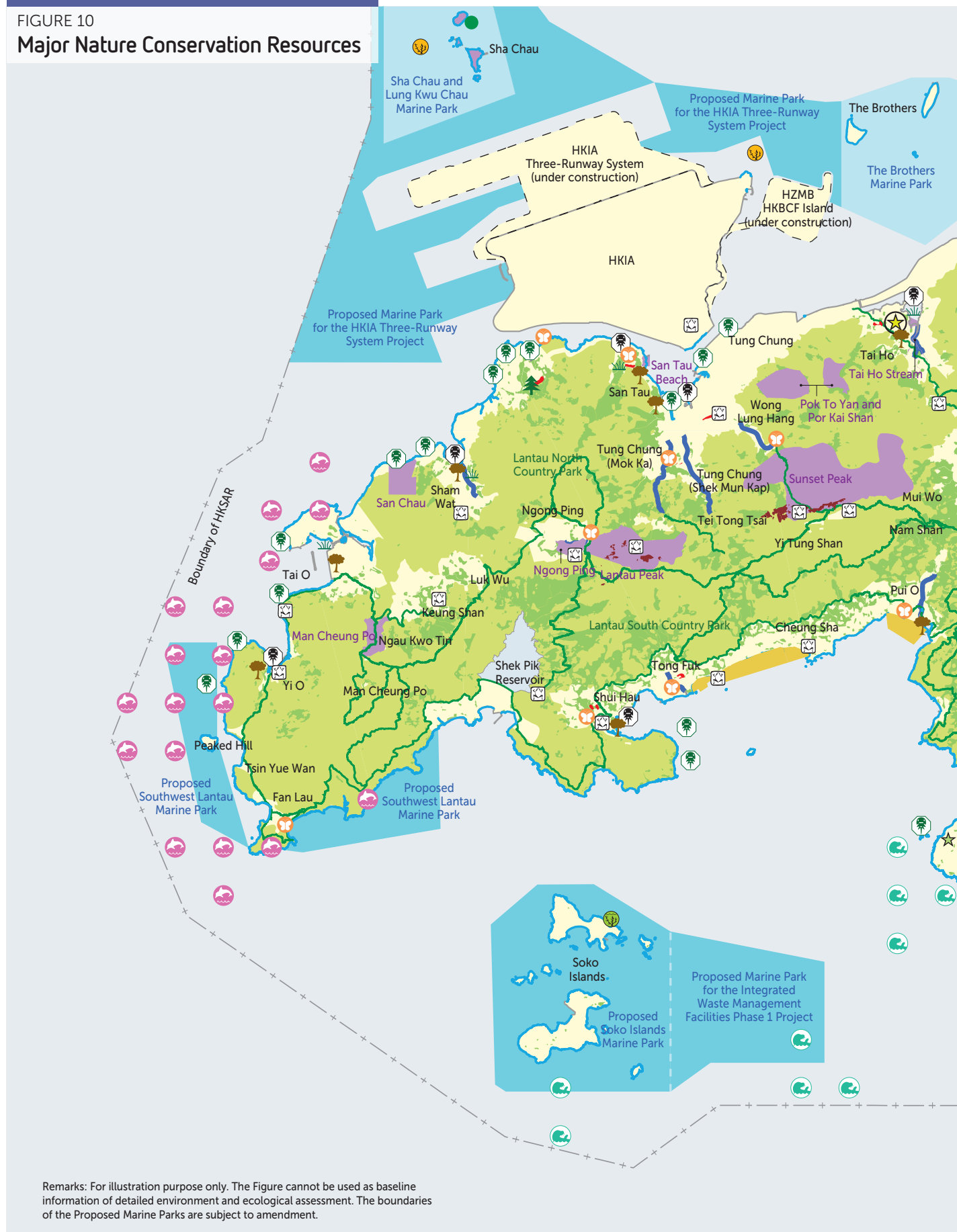
3.3 Conservation in Predominant Part of Lantau

Lantau is well-endowed with unique and magnificent scenery, rich natural landscape, ecological and cultural heritage assets and rural characteristics. There is strong public support for conserving the predominant part of Lantau. LanDAC also advocated in its First-term Work Report that appropriate measures should be undertaken to enhance conservation. Major development should be avoided at sites of conservation interest and their surrounding areas wherever possible. Development proposal in the vicinity should also be subject to impact assessment and feasibility study to ensure the project would not result in unacceptable impact on conservation value of the site. Major view corridors and natural coastline should also be duly respected.

3.3.1 Existing Natural and Cultural Resources

Lantau and its surrounding waters are rich in terrestrial and marine biodiversity. Many indigenous species, such as Chinese White Dolphin, Finless Porpoise, horseshoe crab and Romer's Tree Frog have been found. Some precious species could also be found in Lantau or the nearby islands, such as Bogadek's Burrowing Lizard and White Bellied Sea Eagle. Ecological important sites including montane forest, natural woodland, pristine streams, and coastal waters have been identified (Figure 10).










FIGURE 10
Major Nature Conservation Resources



Remarks: For illustration purpose only. The Figure cannot be used as baseline information of detailed environment and ecological assessment. The boundaries of the Proposed Marine Parks are subject to amendment.











Terrestrial

-  Romer's Tree Frog
-  Presence of Bogadek's Burrowing Lizard
-  Butterfly
-  Nest Site of White-bellied Sea Eagles[#]
-  Egretty Site
-  Old and Valuable Tree
-  Fung Shui Woodland
-  Montane Forest
-  Lowland Forest

[#] AFCD Newsletter Hong Kong Biodiversity Issue No.18 (February 2010)

Marine

-  Artificial Reef
-  Mangrove
-  Key Coral Area
-  Sea Grass Bed
-  Horseshoe Crab
-  Juvenile Horseshoe Crab Site
-  Chinese White Dolphin
-  Finless Porpoise

-  Country Park
-  Natural Coastline
-  Gazetted Beach
-  Lantau/Countryside Trail
-  Priority Site for Enhanced Conservation under New Nature Conservation Policy
-  Ecologically Important Stream
-  Site of Special Scientific Interest
-  Existing/Proposed Marine Park
-  Fish Culture Zone

On cultural aspect, Lantau is one of the earliest settlements in Hong Kong and possesses a wealth of monuments, historic buildings and sites of archaeological interest. There are 5 declared monuments, being the Rock Carving at Shek Pik, Stone Circle at Fan Lau, Fan Lau Fort, Tung Chung Fort and Tung Chung Battery, and 46 graded or proposed to be graded historic buildings, including Yeung Hau Temple (Grade 1 historic building) and Kwan Tai Temple (Grade 2 historic building) in Tai O, Yuen's Mansion (six Grade 2 historic buildings) in Mui Wo, Hau Wong Temple (Grade 2 historic building) in Tung Chung (Figure 11). Besides, there are a number of sites or activities of significant cultural heritage, archaeological or religious value, such as the renowned Po Lin Monastery and the Dragon Boat Water Parade in Tai O which is included in the list of China's national intangible culture heritage.

FIGURE 11
Major Cultural Heritage Resources



* Photos from Antiquities and Monuments Office

3.3.2 Nature and Cultural Conservation Initiatives

Taking note of the above, a set of conservation initiatives has been formulated. A “point-line-plane” approach is proposed to connect places of ecological and cultural value in Lantau by walking trails, forming a network of natural and cultural resources of Lantau. These resources can be further manifested and public enjoyment can be enhanced (Figure 12).

FIGURE 12
Conservation Plan



Remarks: For cultural heritage resources, please refer to Figure 11. The boundaries of the Proposed Marine Parks are subject to amendment. For illustration purpose only. Proposals are subject to review/study.

There are also a number of important landmarks, special landscape characters and local characteristics in Lantau, such as Tian Tan Buddha Statue, Ngong Ping Cable Car System, Tai O Fishing Village, river valleys and natural coastlines. Through application of good urban design principles, new developments shall be made compatible with these landmarks and characters to foster the identity of Lantau.

(i) Strengthening Statutory Protection of Land

About 70% of land in Lantau has already been designated as country parks under Country Parks Ordinance to provide statutory protection against incompatible developments. Sites of ecological importance or interest outside country parks have been mainly designated as conservation-related zonings⁶ under the statutory town plans, where only limited development is allowed with or without planning permission from the Town Planning Board. In total, about 86% of the land in Lantau⁷ has been designated as country parks or conservation-related zonings for statutory protection. In addition, there are eight SSSIs⁸ in Lantau. Except the SSSI at San Tau Beach, other SSSIs in Lantau are entirely or largely within country parks or statutory plans with statutory cover. No development should be permitted within country parks and SSSIs unless with permission. Due consideration should be given to conservation when developments at or near the above sites are proposed.

The Government has been gradually extending statutory protection through designation of country parks under Country Parks Ordinance or preparation of statutory plans under Town Planning Ordinance. Since 2007, an additional area of about 3,400 ha has been put under statutory control⁹. Currently, there are 5 country park enclaves in Lantau covering a total area of about 33 ha¹⁰. The Government will expedite the process for offering better protection of these areas.

6 For example, (i) Leung Uk Marsh, Tai O Reedbed, Po Chu Tam Egretty and Tai O salt pans mangrove planting area are zoned "Conservation Area" (CA), (ii) the natural coastlines at Pui O, Cheung Sha, Tong Fuk, Shui Hau and Discovery Bay are zoned "Coastal Protection Area" (CPA), and (iii) the fung shui woodlands in Mui Wo, Cheung Sha and Tong Fuk, and natural areas at Fan Lau, Shek Pik, Tai Long Wan, Pui O and Cheung Sha are under "Green Belt" (GB) zone.

7 As at April 2017, the "86% of land" refers to the total of about 10,200 ha of land designated as country parks and about 2,600 ha of land zoned "GB", "CA" and "CPA" as compared with the total area of Lantau of about 14,700 ha.

8 The eight SSSIs in Lantau are at the Sunset Peak (331 ha), Man Cheung Po (29.2 ha), Lantau Peak (116 ha), Tai Ho Stream (5 ha), Pok To Yan and Por Kai Shan (76.4 ha), San Tau Beach (2.7 ha), San Chau (36 ha) and Ngong Ping (14 ha). In addition, there are four SSSIs on the nearby islands, i.e. at South Lamma Island (345 ha) and Sham Wan (4 ha), Lung Kwu Chau, Tree Island and Sha Chau (54.4 ha), and Sunshine Island (54 ha).

9 As at April 2017, the "3,400 ha put under statutory control since 2007" include about 2,300 ha of the Lantau North (Extension) Country Park designated in 2008 and about 1,100 ha under new statutory plans. The figure involves some areas to be reclaimed, e.g. Tung Chung East.

10 Five country park enclaves include Tsin Yu Wan (4 ha), Tei Tong Tsai (15 ha), Yi Tung Shan (7 ha), Man Cheung Po (2 ha) and a site near Peaked Hill (5 ha). In addition, the enclave at Nam Shan (6 ha) has been currently included in the country park designation exercise.

(ii) Designation of Marine Parks

There are two existing marine parks in the surrounding waters of Lantau. They are the Sha Chau and Lung Kwu Chau Marine Park (about 1,200 ha) and The Brothers Marine Park (about 970 ha). The Government will continue to take forward the preparation work for designating the proposed marine parks, including the Southwest Lantau Marine Park (about 650 ha), the Soko Islands Marine Park (about 1,270 ha), the Marine Park for the Integrated Waste Management Facilities (IWMF) Phase 1 Project (not less than 700 ha) and the Marine Park for the HKIA 3RS Project (about 2,400 ha). In sum, not less than 7,100 ha waters around Lantau would be under marine park protection.



By designating waters of important ecological value as marine park, activities in the waters concerned will be regulated by the Marine Parks Ordinance and the Marine Parks and Marine Reserves Regulation. It will be conducive to the conservation of marine ecology in the long run by providing an improved habitat for marine lives.

(iii) Strengthening Land Control against Illegal Dumping

Dumping of construction waste must comply with all relevant laws in Hong Kong, including environmental protection laws. However, occasional illegal dumping activities of construction waste were spotted, e.g. near Pui O beach. There is grave public concern on the possible proliferation of such illegal activities in South Lantau, particularly the ecologically sensitive habitats. The Government has formed an inter-departmental working group on fly-tipping control and will take a pro-active role to strengthen measures against illegal dumping of construction waste. According to the 2017 Policy Address, the Government is preparing the legislation required to mandate the use of Global Positioning System on construction waste collection vehicles to combat illegal depositing of construction waste. We will closely monitor the situation in Lantau and explore appropriate measure and enforcement action whenever appropriate.

(iv) Conservation of Wetland at Pui O

Wetlands are treasured for their distinct ecosystem and their role in the environment, such as flood control, shoreline stabilisation and water purification. There is wetland in Pui O which was previously paddy field. It is rich in biodiversity of wetland plants and macro-invertebrates and is reminiscent of the living of farmers a few decades ago. The water buffaloes living there now are part of that cultural history. Apart from being a local visitor destination, Pui O can be an important educational resource to showcase the rural history of Hong Kong and the valuable wetland flora and fauna. Measures for conservation of Pui O wetland are being explored.



(v) Conservation of Mudflat and Sandflat Habitats

The natural sandflat or mudflat habitats at Shui Hau Wan and Yi O are important due to their high level of biodiversity and ecological value, such as providing an important breeding and nursery ground for horseshoe crab species. Residents and visitors can also enjoy the scenic environment. Recently, many people visit these places for clam digging in the weekends. There is public concern on the impact of over-digging activities on the existing ecological habitats and call for appropriate conservation and management measures. To reduce the disturbance to these natural habitats and enhance their ecological value, management measures would be explored in collaboration with relevant stakeholders. In parallel, supporting facilities, such as information kiosks, signage, benches and shelters, where

appropriate, would be provided in support of public appreciation of the habitats while promoting public awareness on nature conservation.



(vi) Rural Sewerage Improvement

Some remote villages in Lantau are unsewered and rely on on-site sewage treatment, such as septic tank and soakaway system. The Government is planning to improve village sewerage system in Lantau progressively with a view to enhancing the environment and living quality. Works under planning include extension of village sewerage network in South Lantau, upgrading of the existing sewage treatment plant at Tai O, and construction of sewage pumping stations and village sewerage works to serve the need of locals.

(vii) Preservation of Declared Monuments

There are 5 declared monuments in Lantau. They are the Rock Carving at Shek Pik, Stone Circle at Fan Lau, Fan Lau Fort, Tung Chung Fort and Tung Chung Battery. Apart from preservation, we suggest enhancing the conservation, education and tourism values of these monuments. For example, for the Rock Carving at Shek Pik which shows geometric patterns composed of spiral squares and circles that closely resemble those on Bronze Age artefacts, opportunities will be explored to improve the heritage setting of the monument by measures such as relocating the refuse collection facilities in the proximity and providing supporting facilities such as interpretation boards. Through “point-line-plane” approach, we plan to link up Fan Lau Fort and Stone Circle at Fan Lau with the Shek Pik Rock Carving through a walking trail for public appreciation and enjoyment.

(viii) Preservation of Graded Historic Buildings

There is a number of graded historic buildings in Lantau, including Yeung Hau Temple (Grade 1 historic building) and Kwan Tai Temple (Grade 2 historic building) in Tai O, Yuen’s Mansion (six Grade 2 historic buildings) in Mui Wo, Hau Wong Temple (Grade 2 historic building) in Tung Chung and the Old Tai O Police Station (Grade 2 historic building) which was converted into a heritage hotel. The Government will continue identifying historic buildings suitable for adaptive re-use for inclusion into the “Revitalising Historic Buildings Through Partnership Scheme”. Financial assistance would also be available for the owners to maintain the privately-owned graded historic buildings, upon successful application.



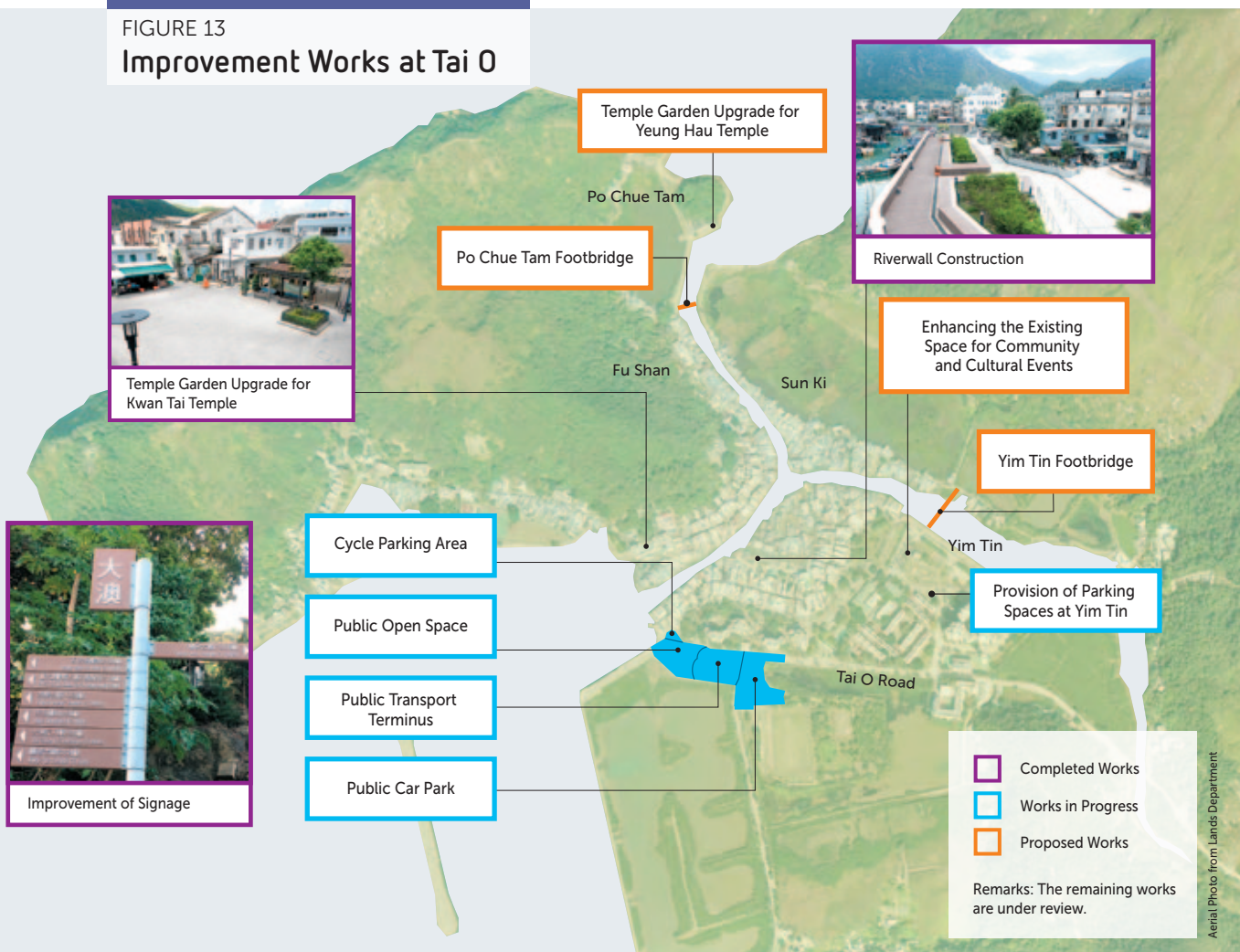
(ix) Tai O Nature and Cultural Heritage District

Tai O is a traditional fishing village. The iconic feature of stilt houses together with a number of graded historic buildings in Tai O, such as Yeung Hau Temple (Grade 1 historic building), Old Tai O Police Station (Grade 2 historic building), Kwan Tai Temple (Grade 2 historic building), have made Tai O a famous tourist spot. In addition, the Tai O Dragon Boat Water Parade, a unique traditional festive event, was inscribed on China's third national list of intangible cultural heritage. Tai O had been famous for salt-panning and rice paddy field for centuries. Apart from the distinctive culture and heritage background, Tai O also has valuable natural assets such as wetlands and mangroves.

We have been carrying out local improvement works at Tai O in order to improve the environment for the locals and the experiences of visitors. The improvement works which mainly include local facilities, such as traffic management improvement and Temple Garden enhancement, have commenced and would be implemented in phases (Figure 13).

FIGURE 13

Improvement Works at Tai O



To further promote the nature and cultural heritage conservation and enhance the local environment, we will work on the following initiatives:

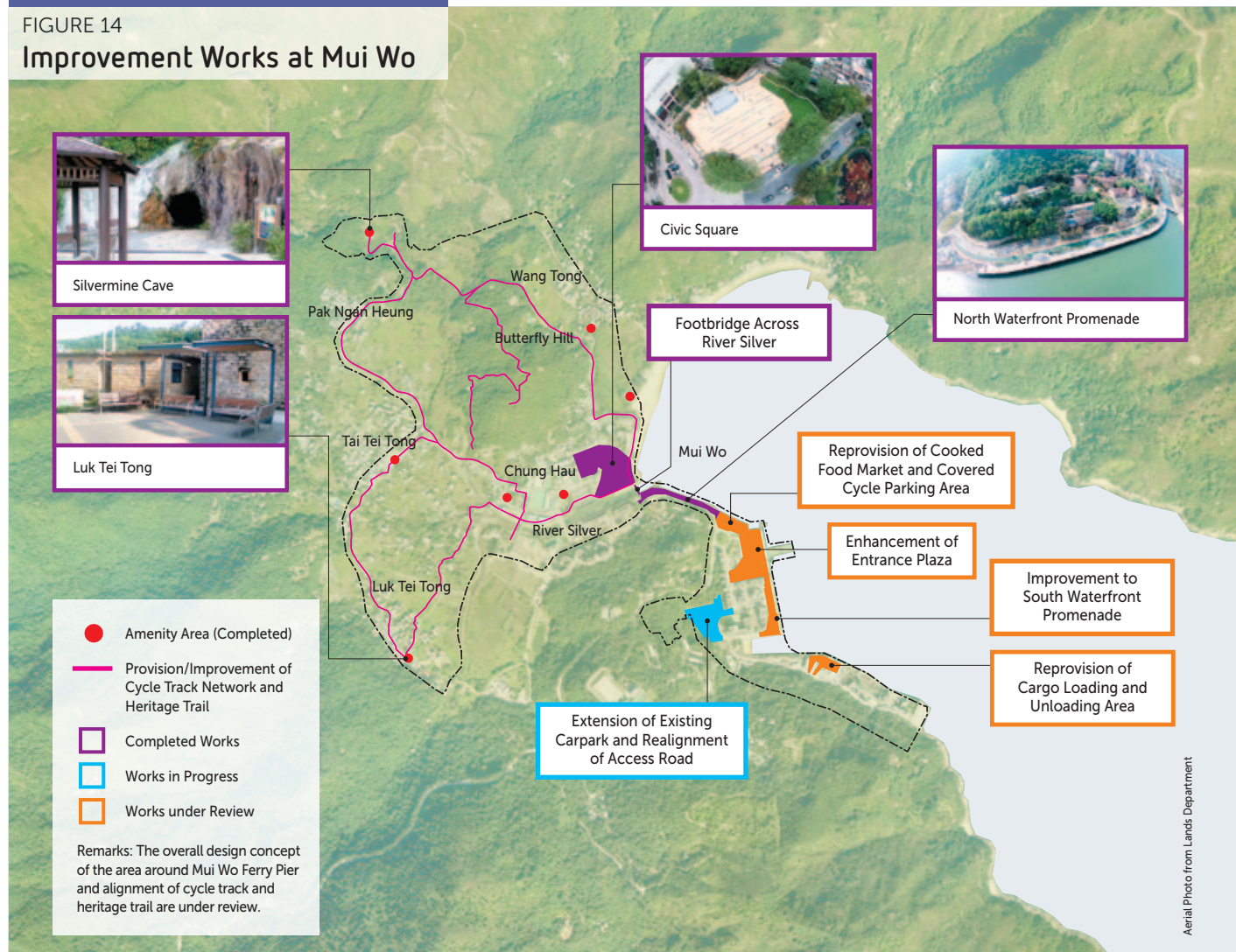
- (a) explore the feasibility to set up an exhibition centre to promote the culture and history of Tai O;
- (b) explore the feasibility to demonstrate salt-panning and agricultural activities in appropriate location(s);
- (c) conserve the valuable wetlands and mangroves;
- (d) enhance connectivity and walkability among heritage and natural attraction spots by improving trails and footbridges and setting up outer loop nature trail linking wetlands and mangroves; and
- (e) improve the water quality of watercourses in Tai O by investigating the feasibility of upgrading the existing sewerage works.

(x) Preservation of Rural Township Character of Mui Wo

Mui Wo is also called Silvermine Bay where silver mining industry was active in the past. Subsequently, because of the low silver content of the mine, the mining activity stopped. There are two remaining silvermine caves, i.e. the Silvermine Lower Cave and the Silvermine Upper Cave. Together with other scenic spots in the area, such as the Silvermine Bay Waterfall, Silvermine Bay Beach and historic buildings such as Yuen's Mansion (six Grade 2 historic buildings), it is a popular get-away destination from the busy urban environment. Notwithstanding, Mui Wo still maintains its tranquillity and rural township character.

Careful consideration would be given to balancing the needs of development/improvement and preservation of Mui Wo with a view to retaining its rural township character. Through re-planning and optimisation of existing under-utilised land together with the possible cavern development, Mui Wo could be revitalised as an enhanced township with small amount of low-density residential developments as well as recreational and tourism-related uses.

FIGURE 14
Improvement Works at Mui Wo



Local improvement works are being carried out in the area with a view to providing a quality living environment for locals and visitors whilst sustaining the rural township character of Mui Wo. These improvement works aim to improve the environment of the town centre, provide better recreational facilities and enhance road safety. They include provision of a civic square and amenity areas, enhancement of entrance plaza, improvement of cycle tracks and other ancillary works including signage, landscaping, drainage and utilities works (Figure 14). The Government will also explore the possibility of revitalising the Silvermine Cave.

(xi) Nature and Cultural Heritage Trails

Lantau is famous for its network of scenic hiking trails, which link up sites of natural, cultural heritage and ecological interests. To further enhance these trails for public enjoyment and promote public awareness on nature and cultural conservation, we would explore the provision of supporting facilities. These may include improvement of signage, setting up information kiosks, and provision of maps, toilets and emergency telephones. We will also encourage community involvement in formulating the improvement proposals.

As a start, we would explore improving the ancient trackway linking Ngong Ping to Shek Pik, the ancient boulder trackway linking Fan Lau to Yi O, the walking trail linking up Fan Lau Fort and Stone Circle at Fan Lau with the Shek Pik Rock Carving, and the Tung O Ancient Trail along the coastal area between Tai O and Tung Chung, which could be further extended to connect with the proposed Tung Chung Nature and Cultural Heritage Trail.

Along these trails, there are villages of religious and cultural heritage values and vestige of early settlement of Hong Kong. The proposed enhancement would also be extended to connect the trails with the nearby recreation, cultural and ecological resources for public enjoyment, where appropriate.

(xii) Collaboration with Stakeholders

The Government would study in detail the feasibility of individual proposals and consult relevant bureaux/departments and the public before project implementation. We will actively engage relevant stakeholders, including green groups, conservationists and locals during the process. A Task Force on Lantau Conservation has been set up under the Sustainable Development Subcommittee of LanDAC for relevant stakeholders to advise on nature, historical and cultural heritage conservation initiatives that are conducive to the sustainable development of Lantau.

(xiii) Exploration of Funding Source

To further promote the revitalization of remote rural areas, the 2017 Policy Address pledges that the Government will establish a preparatory committee to study the ambit and modus operandi of a conservation fund, as well as the legislation and resources required for setting up such a fund. Besides, different government and community resources will be deployed to take forward various rural conservation initiatives, including nature conservation and education, revitalisation of old village buildings, as well as promotion of ecological and cultural tourism. To take forward the policy and engage the community to promote conservation, the Government will explore funding support to facilitate conservation projects in Lantau. As a start, the Environment and Conservation Fund has earmarked \$30 million in 2017-18 for supporting nature conservation projects in South Lantau.

3.3.3 Space for Sustainable Leisure and Recreational Uses

In the areas of high conservation value, e.g. country parks and SSSIs, major developments should be avoided. In areas of lower environmental sensitivity, some low-impact leisure and recreation activities could be considered (Figure 15). The leisure and recreation proposals should be environmentally sustainable and be compatible with the local context.

(i) Cycle Track and Mountain Bike Trail Network



In South Lantau, the improvement works to the existing mountain bike trail spanning from Pui O to Kau Ling Chung of about 17 km are on-going and scheduled for substantial completion in mid 2017. The expansion of mountain bike trail network in phases and the construction of a mountain bike training ground in Mui Wo have commenced in

2016 for substantial completion in mid 2018. A cycle track network has been planned under the TCNTE Study. We will undertake further studies with a view to providing a continuous cycle track spanning from Tung Chung to Sunny Bay with a total length of about 20 km along the northern shore of Lantau and study on the feasibility of providing a cycle track along South Lantau from Pui O to Shui Hau of about 11 km.

We endeavour to provide a cross-Lantau cycle track and mountain bike trail network in the long term. The feasibility of connecting or expanding the cycle track and mountain bike trail network will be investigated. The proposed improvement to the cycle track and mountain bike trail network could surely enhance connectivity in Lantau and increase their recreational potential with enjoyment of the coastal view of Lantau.

(ii) Camping Grounds

There is a strong demand for high-quality camping grounds in recent years. Themed camping grounds or accommodations in the form of tents with regular beds and air conditioning are found along the southern shore of Lantau. We are exploring the feasibility to facilitate the setting up of themed camping grounds at South Lantau, such as in Shui Hau, Tong Fuk, Pui O and Shek Pik. In parallel, traditional camping grounds would also be explored at appropriate locations for visitors and the public to enjoy the natural resources of Lantau.



FIGURE 15
Major Initiatives for Leisure, Recreation and Sports



1 Tung Chung Nature and Cultural Heritage Trail



2 Tung Chung Town Park



3 Mountain Bike Training Ground



4 Water Sports Centre



5 Beach Volley Ball Court



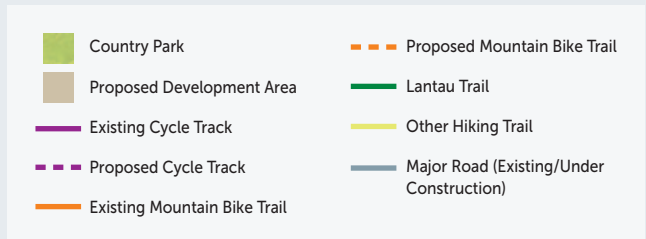
6 Camping Grounds



7 Flowers/Trees Appreciation



8 Tai O Outer Loop Nature Trail



Remarks: For illustration purpose only. Proposals are subject to review/study.

(iii) Flowers / Trees Appreciation

In recent years, many visitors are attracted to Japan and South Korea during cherry trees blossoming period. The cherry trees at Cheung Chau and Kadoorie Farm also attracted many local visitors during the flowering season though the scale of blossoming is relatively small. We plan to plant cherry trees at Ngong Ping for development of blossoming tours in Lantau.



Ngong Ping is chosen for trial planting of cherry trees because of its suitable climate condition, good transport connectivity as well as the synergy with the existing tourist attractions there. A walking circuit featuring cherry trees is proposed at areas around Ngong Ping Village and Ngong Ping Fun Walk. The planting works are scheduled for commencement in late 2017 or early 2018.

We will also explore to plant local floral trees such as *Enkianthus quinqueflorus* Lour and trees with red autumnal leaves such as *Liquidambar Formosana* along a section of old Tung Chung Road between Pak Kung Au and Cheung Sha. The old Tung Chung Road has been closed and hence offers a good and safe environment for people to enjoy the floral trees and red autumnal leaves during spring and fall seasons.

(iv) Other Spots for Leisure, Recreation and Sports

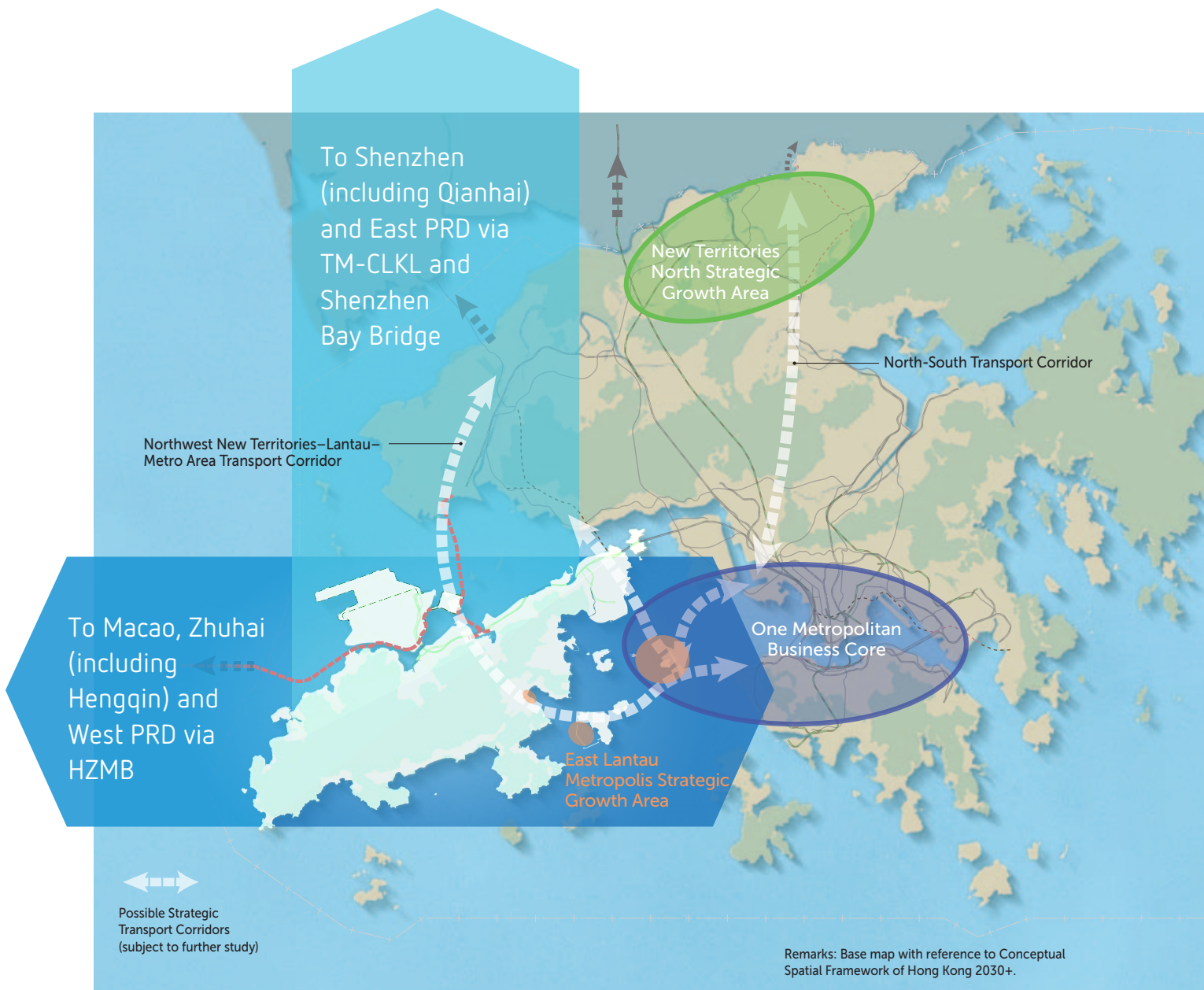
With beautiful beaches and scenic mountain backdrops, there is potential to develop various kinds of outdoor activities at different locations along the southern shore of Lantau. For example, we would explore the opportunities to provide Beach Volley Ball Court at Cheung Sha, Water Sports Centre at possible location such as Pui O, and Adventure Park at appropriate location. On the other hand, by promoting eco-tours in various locations in Lantau, the public could appreciate and be educated about preserving the rich natural and cultural assets in Lantau. To enhance the connectivity between attractions, the feasibility of providing "hop-on hop-off" services and green transport services, such as E-car charging points in Lantau will also be explored. These are preliminary proposals with their feasibility, location, scale, funding, connectivity and mode of operation to be further studied.



3.4 Connectivity and Accessibility

To meet the transport needs arising from a sustainable Lantau development, the planning and implementation of a comprehensive traffic and transport infrastructure network is essential. It is also important to have a comprehensive transportation network comprising strategic railway and road systems in support of the proposed strategic developments in North Lantau and the ELM, as well as to complement the overall development needs of Hong Kong (Figure 16A). In addition, water transport and improvement measures to traffic and transport facilities are considered with a view to enhancing internal connection and accessibility of Lantau.

FIGURE 16A
Connectivity of Lantau



3.4.1 Strategic Railway System

On top of the existing Tung Chung Line, Airport Express Line and Disneyland Resort Line, the Tung Chung West Extension with a new station at Tung Chung West has been recommended under the Railway Development Strategy 2014. An additional railway station along the Tung Chung Line at Tung Chung East has also been proposed to support the new development in Tung Chung East under the TCNTE Study. A possible station at Siu Ho Wan is also being explored by the MTRCL to meet the transport needs of the proposed residential development atop the existing Siu Ho Wan Depot.



When the ELM proposal is carried forward, there is a need to connect the ELM with the existing urban areas, including the traditional CBD, by means of mass transit system. Railway would be adopted as the backbone transport system to connect the major components of the ELM internally as well as with the Metro Area and North Lantau externally. With a view to providing a more efficient and convenient connection with the NWNT to enhance connectivity of various developments of different economic land uses and to facilitate the workforce of the NWNT to travel to Lantau, it is further suggested to explore a railway connection between Tung Chung East and Tuen Mun South via the HKBCF Island of the HZMB, thereby forming a railway corridor linking NWNT-Lantau-ELM-Metro Area (Figure 16B).

This railway corridor will not only support the ELM and developments at North Lantau, but also help enhance the resilience of the overall transport infrastructures connecting Lantau, including the airport.

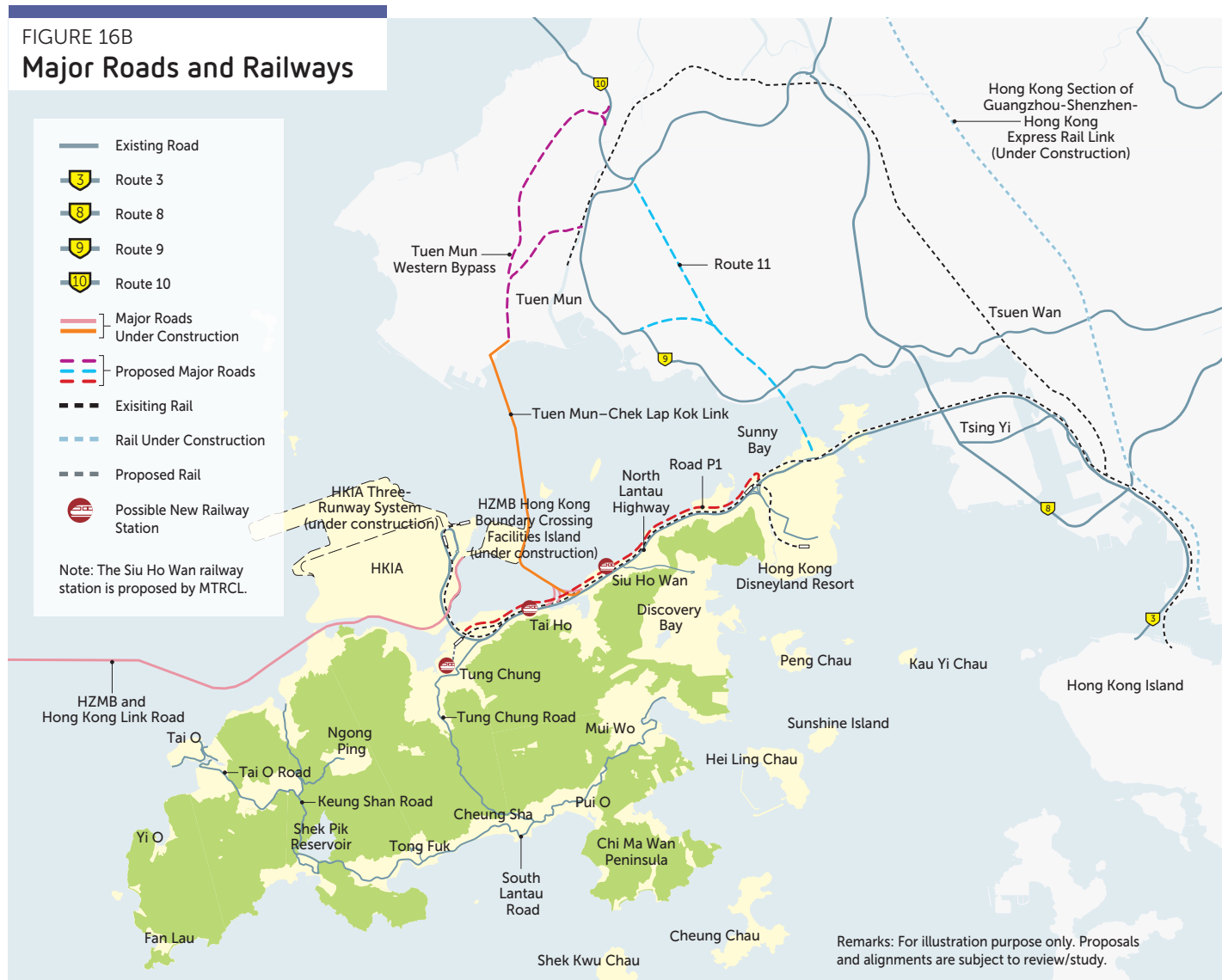
3.4.2 Strategic Road System

The North Lantau is mainly served by the North Lantau Highway, and connected to the south via Tung Chung Road. Road P1 is proposed to strengthen the connectivity of the major developments along the northern shore of Lantau. Details of the proposed Road P1 would be subject to further study.

To support the proposed ELM, a new strategic highway corridor could be explored to connect the ELM eastwards to Hong Kong Island West, and northwards to northeast Lantau/North Lantau Highway which could then be further connected to the NWNT via the TM-CLKL under construction and the proposed Route 11 (Figure 16B). It also provides an alternative access to the airport and the NWNT. The connection of the ELM to North Lantau Highway via Mui Wo may be a potential linkage for the longer term, subject to the development scale of the ELM. In this way, a ring-shaped road corridor will be formed which can further connect with Shenzhen, the Greater PRD and western Guangdong through the HZMB, TM-CLKL, Tuen Mun Western Bypass (under planning), Kong Sham Western Highway and Shenzhen Bay Bridge, facilitating the flow of people, as well as logistics and economic activities.

3.4.3 Water Transport

There are currently six regular ferry services serving Lantau.¹¹ The water transport of Lantau can be strengthened to supplement land transport, subject to further studies. More piers and marinas/mooring facilities in TCNTE and the future reclaimed area of Sunny Bay for promoting its position as Northeast Lantau Tourism Gateway can be explored. Opportunities could be further explored to enhance connection amongst North Lantau, South Lantau (e.g. Cheung Sha, Tong Fuk, Shek Pik, Fan Lau and Yi O along the south and southwest coasts of Lantau) and other outlying islands. Together with the existing water transport facilities, a network could be formed to improve the accessibility of various areas in Lantau and promote leisure and alternative sightseeing activities for visitors.



11 The six regular ferry routes serving Lantau include (1) Inter-islands; (2) Mui Wo – Central; (3) Tai O – Sha Lo Wan – Tung Chung – Tuen Mun; (4) Discovery Bay – Central; (5) Discovery Bay – Mui Wo; and (6) Discovery Bay – Peng Chau (Kaito service).

3.4.4 Traffic Management and Transport Facilities Improvement

Apart from the strategic transport infrastructures, Lantau's internal road arrangements and transport facilities have to be enhanced to meet the demand. At present, Tung Chung Road (the section at the south of Shek Mun Kap Road) and all other roads on South Lantau are designated as closed roads where motorists are not allowed to enter, except those with permits. The



The Government has reviewed the closed road arrangement taking into consideration the road conditions, traffic flow, parking facilities and their utilisation on South Lantau, as well as public views, and suitably relaxed the arrangement to increase the maximum number of coaches permitted to enter South Lantau per day from 30 to 40, and allow 25 private cars¹² to enter South Lantau on Mondays to Fridays (except public holidays) for leisure and recreational purposes. The Government will continue to closely monitor the utilisation of roads on South Lantau and take appropriate measures where necessary to ensure safe and smooth road traffic in the balance of environmental conservation.

For South Lantau, South Lantau Road, Keung Shan Road and Tai O Road are the main accesses, which connect villages along the roads from Mui Wo to Tai O. The Government endeavours to enhance the accessibility to the remote villages in the South and has been working on road widening and road bend improvement projects along South Lantau Road and Keung Shan Road.

The Government is also actively exploring the opportunities to increase public transport facilities at suitable locations, such as car parking spaces, and to enhance the road-based public transport services. Detailed traffic assessments will be carried out for the proposed improvement to the existing traffic and transport infrastructures and to ensure the induced traffic and transport impact to be satisfactorily catered for. Green transport would be encouraged with a view to enhancing the environment of Lantau.

The Government has planned to undertake a comprehensive study on traffic, transport and capacity to receive visitors for Lantau with a view to investigating the feasibility to improve internal and external connectivity for Lantau to meet the needs of future development with due consideration on visitors receiving capacity. The provision of additional piers and marinas/mooring facilities at appropriate locations to create a water transport network in complementing land-based transport, thus diverting heavy road traffic during holidays would also be examined.

¹² Amongst the quota of 25, five will be allocated to electric private cars for promoting environmental protection.

4. IMPLEMENTATION

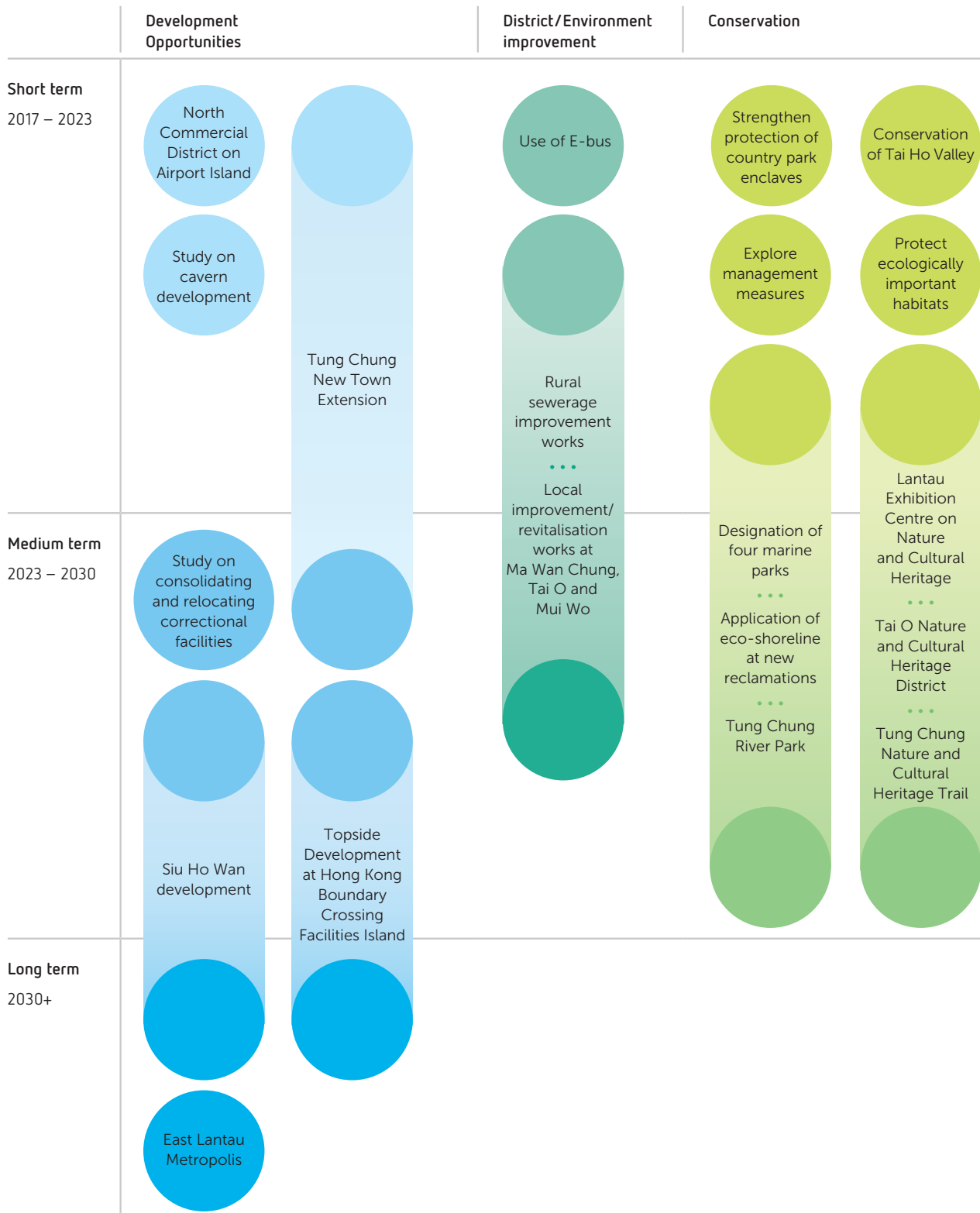
The Blueprint guides the long-term development of Lantau. In order to assess the broad environmental implications of the proposals in early planning stage, a Strategic Environmental Assessment for Hong Kong 2030+ which covers Lantau is being conducted. When carrying out individual projects, detailed environmental impacts would need to be evaluated with appropriate mitigation measures proposed in the planning, engineering and technical studies of the projects.

To take forward the Blueprint, various studies and works projects would be carried out in different time frames. According to the earliest possible commencement year of the proposal, the implementation of various proposals is grouped into short term (2017-2023), medium term (2023-2030) and long term (2030 onward) (Figure 17). To give a holistic view, the implementation programme has also included projects currently undergoing detailed design or at construction stages, such as detailed design of the TCNTE and improvement works at Tai O and Mui Wo. For other projects which are still at their preliminary stage, we will actively pursue and carry out necessary studies to ascertain their feasibilities.

In pursuing the economic, housing, social, recreation and tourism developments, as well as conservation initiatives in Lantau which are crucial to the long-term sustainable development of Hong Kong, the Sustainable Lantau Office, which is a dedicated multi-disciplinary office, is planned to be established to take forward the planning, assessment, design and implementation of various development and conservation initiatives and local improvement projects in Lantau in a well prioritised, coordinated and integrated manner.

FIGURE 17
Indicative Implementation Programme

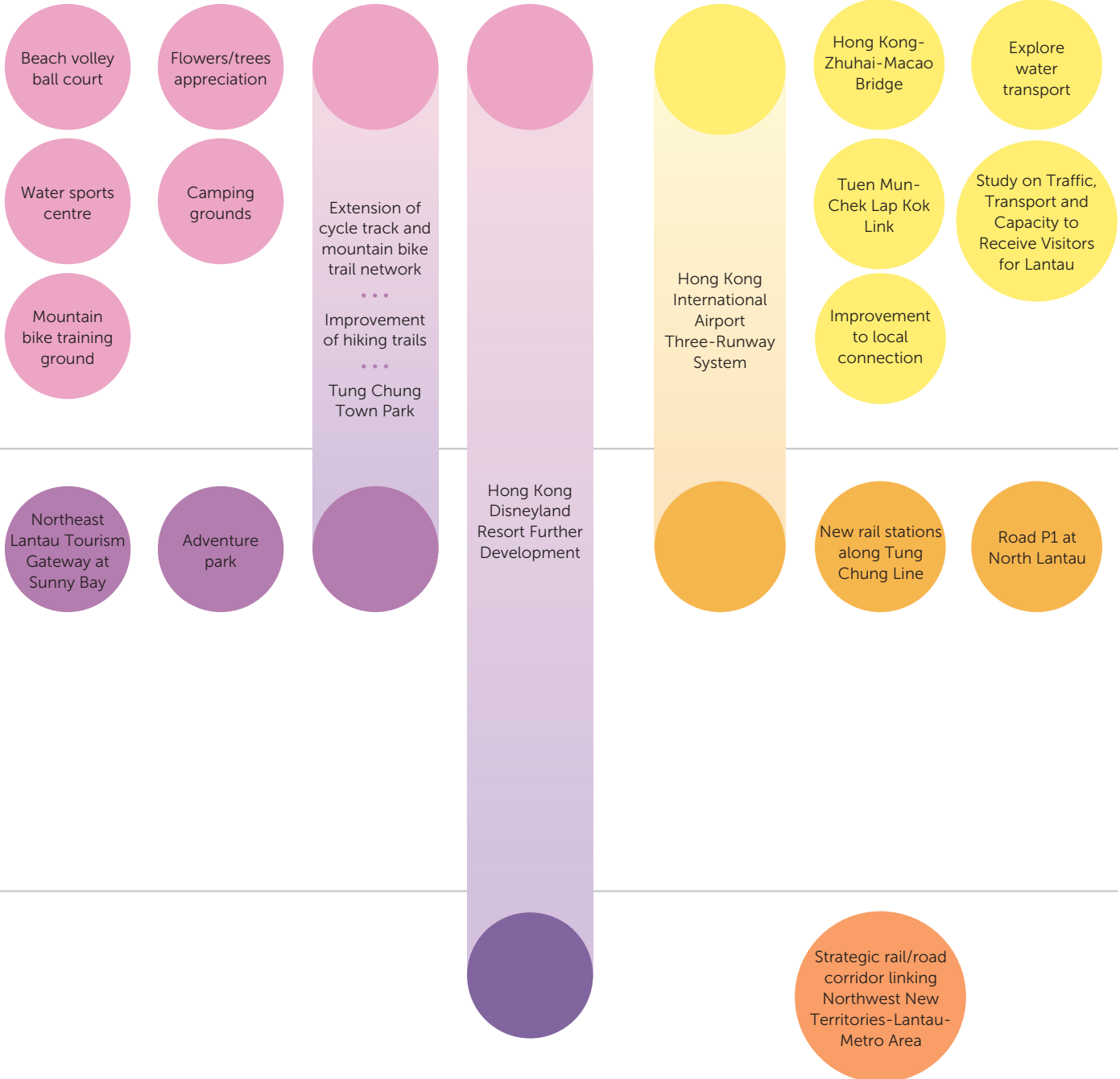
We will further study the feasibility of various proposals and implement those that would contribute to the sustainable development of Lantau and Hong Kong.



Remarks: For illustration purpose only

Leisure & recreation

Transportation



5. WAY FORWARD

Recognising the fast changing circumstances, the Blueprint is intended to be reviewed on a need basis to take into account the latest developments. Each development proposal and the implementation priority would be closely monitored to allow flexibility in responding to changes while meeting the needs of Hong Kong.

The Government will continue to communicate with the public and relevant stakeholders. Public views will be suitably taken into account in the planning and design of the projects.



Let's shape a Sustainable Lantau

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