

# **TOWN PLANNING BOARD**

**TPB Paper No. 10283  
For Consideration by  
the Town Planning Board on 19.5.2017**

**CONSIDERATION OF  
NEW DRAFT LOK MA CHAU LOOP  
OUTLINE ZONING PLAN**

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**1. Introduction**

The purposes of this paper are to seek Members' agreement that:

- (a) the new draft Lok Ma Chau Loop Outline Zoning Plan (OZP) No. S/LMCL/E (to be renumbered as S/LMCL/1) (**Annex I of Appendix A**) and its Notes (**Annex II of Appendix A**) are suitable for exhibition under section 5 of the Town Planning Ordinance (the Ordinance); and
- (b) the Explanatory Statement (ES) (**Annex III of Appendix A**) is suitable to serve as an expression of the planning intentions and objectives of the Town Planning Board (the Board) for the draft Lok Ma Chau Loop OZP, and the ES should be issued under the name of the Board.

**2. Background**

- 2.1 The Lok Ma Chau Loop, comprising a land area of about 87.7 ha, was originally within the administrative boundary of Shenzhen. In accordance with Order No. 221 of the State Council of the People's Republic of China promulgated on 1.7.1997, after the training of the Shenzhen River, the boundary will follow the new centre line of the Shenzhen River. The Lok Ma Chau Loop has since been included within the administrative boundary of the Hong Kong Special Administrative Region (HKSAR) and it currently falls outside the Frontier Closed Area.

***Strategic Planning Context***

- 2.2 The "Hong Kong 2030: Planning Vision and Strategy" completed in 2007 has recommended, inter alia, that the Lok Ma Chau Loop, with strategic locational advantage of being near the Futian commercial area across the Shenzhen River, can provide development space to strengthen co-operation between Hong Kong and Shenzhen. Shenzhen authorities share the same vision and consider the future development of the Lok Ma Chau Loop should gear towards the development of high-tech industry, establishing a science and research centre, as well as enhancing Shenzhen and Hong Kong's economic development and collaboration. The regional planning of the Pearl River Delta area also encourages establishing co-operation among institutions of higher education in the area.



- 2.3 The updating exercise of the territorial development strategy, “Hong Kong 2030+: Towards a Planning Vision and Strategy Transcending 2030” (“Hong Kong 2030+”), reaffirmed the strategic location and the potential of high-technology development of the Lok Ma Chau Loop. Under the proposed Conceptual Spatial Framework of “Hong Kong 2030+”, the Lok Ma Chau Loop is located along the Eastern Knowledge and Technology Corridor which agglomerates the existing high-technology and knowledge-based industries and tertiary institutions, as well as the additional innovation and technology developments proposed in the eastern part of Hong Kong. Synergy and mutual growth of these industries could then be achieved through the development of a tech-ecosystem.
- 2.4 In the sub-regional planning context, the Lok Ma Chau Loop is located near the Kwu Tung North New Development Area (KTN NDA) and areas with development potential in New Territories North in Hong Kong as well as the commercial areas in Shenzhen. The development of the Lok Ma Chau Loop can bring an important synergy and give impetus to these adjacent areas and the territory, while these areas can provide supporting facilities and services, talents, customers and markets.

#### ***Planning and Engineering Study on Development of Lok Ma Chau Loop***

- 2.5 In the 2007-2008 Policy Address, the development at Lok Ma Chau Loop was one of the ten major infrastructure projects for economic growth in Hong Kong. In March 2008, the ‘Hong Kong-Shenzhen Joint Task Force on Boundary District Development’ under the ‘Hong Kong/Shenzhen Co-operation Meeting’ agreed that both sides would conduct a joint comprehensive study on the development of the Lok Ma Chau Loop under the principle of ‘co-study, co-development and mutual benefit’. From June to July 2008, the governments of both sides conducted public engagement on the possible future land use of the Lok Ma Chau Loop. The outcomes indicated that higher education, high-tech research and development (R&D) as well as cultural and creative industries (C&C) received more support by the public of both places. The Board was informed of the results of the public engagement exercise on 12.12.2008.
- 2.6 In June 2009, the Planning and Engineering Study on Development of Lok Ma Chau Loop (the LMCL P&E Study) was jointly commissioned by the Civil Engineering and Development Department (CEDD) and the Planning Department (PlanD) with a view to formulating a planning and development framework for the implementation of the Lok Ma Chau Loop. During the course of the study, two stages of public engagement were undertaken. In the Stage 1 Public Engagement of the LMCL P&E Study held between November 2010 and January 2011, the public generally accepted the proposed land uses, and agreed the superior location of the Lok Ma Chau Loop should be capitalized to enhance the co-operation between Hong Kong and Shenzhen, and a balance between conservation and development should be struck under the principle of sustainable development. In the Stage 2 Public Engagement of the Study held between May and July 2012, public opinion was collected in respect of the draft Recommended Outline

Development Plan (RODP) for the Lok Ma Chau Loop. The public generally had no objection to the land uses proposed in the draft RODP.

- 2.7 According to the RODP formulated under the LMCL P&E Study (**Plan 1**), development within the Lok Ma Chau Loop is subject to a maximum total gross floor area (GFA) of 1.2 million m<sup>2</sup> which includes about 1.13 million m<sup>2</sup> GFA for higher education (720,000m<sup>2</sup>/64%), R&D/C&C (411,000 m<sup>2</sup>/36%) uses as well as other supporting uses (including commercial use (60,000m<sup>2</sup>)) and infrastructure. To support the Lok Ma Chau Loop development, supporting external and internal road links as well as government, institution and community facilities are also proposed. Various technical assessments have been undertaken to confirm the technical feasibility of the development.
- 2.8 On 1.11.2013, Members were briefed on the refined RODP of the Lok Ma Chau Loop. A copy of the Town Planning Board Paper No. 9427 and an extract of the relevant minutes are deposited at the Board's Secretariat for Members' reference.
- 2.9 The LMCL P&E Study was completed in full in end 2014. The RODP and the recommendations of the LMCL P&E Study were publicized in Hong Kong and Shenzhen through the Information Digest (A copy of the Information Digest is at **Annex I of Appendix B**). In October 2013, the Environmental Impact Assessment (EIA) Report for the Lok Ma Chau Loop development undertaken as part of the LMCL P&E Study was approved (excluding the Eastern Connection Road) pursuant to the Environmental Impact Assessment Ordinance (EIAO). The Environmental Permit (EP) was also granted in November 2013.

***Policy Direction: Developing the Lok Ma Chau Loop as the Hong Kong-Shenzhen Innovation and Technology Park***

- 2.10 On 3.1.2017, a "Memorandum of Understanding on Jointly Developing the Lok Ma Chau Loop by Hong Kong and Shenzhen" (2017 MOU) was signed between the Hong Kong and Shenzhen Governments, agreeing to jointly develop the Lok Ma Chau Loop as the Hong Kong-Shenzhen Innovation and Technology Park (IT Park), setting up a key base for scientific research, as well as relevant higher education, C&C and other complementary facilities. On 6.3.2017, the Government briefed the Panel on Commerce and Industry, Panel on Development, and Panel on Information Technology and Broadcasting of the Legislative Council on the policy direction and latest situation of the development of the IT Park at the Lok Ma Chau Loop.
- 2.11 Under the 2017 MOU, the HKSAR Government will be responsible for constructing the necessary infrastructures within the Lok Ma Chau Loop and its surrounding area, and will lease the formed land in the Lok Ma Chau Loop to the Hong Kong Science and Technology Parks Corporation (HKSTPC) for the development of the IT Park. HKSTPC will set up a wholly-owned subsidiary company (the project proponent) which will be vested with the responsibility to build the superstructure of the IT Park, as well as to operate,

maintain and manage the same. A consultancy study would be conducted to study the positioning and mode of operation as well as the superstructure planning for the IT Park.

*Key Base for R&D*

- 2.12 A key base for co-operation in top-notch scientific research will be established in the IT Park. Through liaising with top-tier enterprises, R&D institutions and higher education institutions in the Mainland and overseas, a base for co-operation in scientific research will be established for exchanging and co-operating with international research talents. Based on the existing research strengths and development needs of Hong Kong, potential areas for development that could be considered include robotics, biomedicine, smart city and Fintech. However, due to the rapid advancement of technology, these development areas will have to be reviewed with regard to the situation and needs of the latest economic developments at that time.

*Higher Education/C&C Uses*

- 2.13 The 2017 MOU also states that an ‘Integrated Advanced Training Platform’ will be set up in the IT Park through soliciting proposals from the world’s top higher education institutions (including higher education institutions in Hong Kong, the Mainland and overseas) for operating branches or new institutions in the IT Park. These branches or new institutions will focus on the provision of postgraduate programmes and professional training courses on new or advanced technology, aiming to nurture talents and engender synergy and clustering effects with the facilities in the IT Park. Relevant C&C supporting facilities will also be provided to complement with the scientific projects and activities in the IT Park.
- 2.14 As per the policy direction under the 2017 MOU, the Lok Ma Chau Loop would be developed for the three main uses of R&D, higher education, and C&C uses as recommended under the LMCL P&E Study. While the development in the IT Park would still be subject to a maximum total GFA of 1.2 million m<sup>2</sup>, there could be a flexible allocation of GFA among the three uses where appropriate to meet the changing situation and needs of the economic development. A technical review has been undertaken by CEDD and PlanD to confirm the technical feasibility of the flexible development mix among the three main uses. According to the review findings (**Annex II of Appendix B**), it is confirmed that the planned infrastructure and facilities could support a development mix of up to 70% of the maximum total GFA of about 1.13 million m<sup>2</sup> for R&D/C&C uses and the remaining 30% for higher education (as compared with the original scenario of 64% for higher education and 36% for R&D/C&C uses). Apart from the flexible mix of the three main uses, other supporting commercial, government, institution and community, and infrastructure facilities remained the same.
- 2.15 While CEDD is responsible for the detailed design and implementation of the site formation, land decontamination and environmental mitigation works and provision of infrastructures within the Lok Ma Chau Loop and in the surrounding area, disposal of various development sites within the Lok Ma Chau Loop will be undertaken by the Lands Department. To take forward

the development, the HKSTPC/its subsidiary company, which will be responsible for developing and managing the IT Park, will conduct further studies on the positioning and mode of operation of the IT Park as well as prepare a master plan for the Lok Ma Chau Loop development with development phasing/programme, detailed land uses and detailed design with regard to the requirements in the approved EIA Report and EP.

### 3. **Draft Lok Ma Chau Loop OZP**

- 3.1 On 5.11.2013, a directive was given by the Secretary for Development under the power delegated by the Chief Executive, pursuant to section 3(1)(a) of the Ordinance, to prepare a draft outline zoning plan for the Lok Ma Chau Loop.

#### ***Object of the Plan***

- 3.2 The new draft Lok Ma Chau Loop OZP was prepared to take forward the recommendations of the LMCL P&E Study and the policy direction of 2017 MOU (set out in paragraphs 2.5 to 2.15 above). The object of the Plan is to delineate the planning scheme area for the Loop development and to set out the broad land use zonings and major road network within the Lok Ma Chau Loop area. The OZP provides the statutory land use framework for the development of the Lok Ma Chau Loop. Taking into account the master plan to be prepared for the IT Park (paragraph 2.15 refers), a more detailed departmental Outline Development Plan (ODP) would be prepared in consultation with Government departments concerned. The OZP together with the ODP, when available and where appropriate, should generally be followed in land transactions and allocations.

#### ***Planning Scheme Area***

- 3.3 The Planning Scheme Area (the Area) of the draft OZP is about 104 ha (**Plan 2**). It covers the Lok Ma Chau Loop (about 87.7 ha) and the meander section of the Old Shenzhen River (about 16.3 ha). The Lok Ma Chau Loop area is a piece of flatland which is covered mainly by grass, scattered tree clusters and some marshes with reed (**Plans 3 and 4**). There is currently no population in the Area and no development has been established yet. It is estimated that the planned working/student population in the Lok Ma Chau Loop will be in the range of 50,000 to 53,000.
- 3.4 The Area is located in a transition zone between the highly urbanized commercial / residential development in Shenzhen and the rural hinterland of Hong Kong. It is bounded by the bank of Shenzhen River in the northwest, fishponds of Hoo Hok Wai in the northeast, Lok Ma Chau and Tai Law Hau in the south, the Lok Ma Chau Control Point and Lok Ma Chau Spur Line Control Point in the southwest. To the further north, across the Shenzhen River, is the Futian commercial area and Huanggang Port of Shenzhen. The KTN NDA is located approximately 920m to the southeast of the Lok Ma Chau Loop (**Plans 5 and 6**).

### ***Major Planning Themes***

3.5 The Lok Ma Chau Loop would be developed as the IT Park with a mix of R&D, higher education, and C&C uses. Apart from these three major land uses, supporting commercial, as well as government, institution and community facilities would be provided to serve the development. The major land use framework (**Plans 7 and 8**) for the Lok Ma Chau Loop are as follows:

- (a) Innovation/Education/Cultural and Creative Zone – The Zone comprises the core development parcels of the Lok Ma Chau Loop. In view of the rapid advancement of technology and complementary nature of the uses, a flexible mix of the development including teaching and research facilities, offices, research/design and development centres, lecture and exhibition facilities, etc. is allowed in this Zone. Supporting commercial facilities such as retail, general office accommodation, hotel and residential institution, etc. would also be provided within the Lok Ma Chau Loop. Within this Zone, sufficient local open space would be provided for creating a pleasant environment fostering interaction between users and enhance visual openness of the Lok Ma Chau Loop.
- (b) Interaction Zone – The Interaction Zone in the form of amenity/activity corridors runs through the middle of the Area in a northwest-southeast direction. It is intended to provide a people-oriented environment for promoting social interaction and economic vibrancy for the IT Park. It would provide a platform for exchange of ideas and cultural/recreational activities through organization of various activities.
- (c) Ecological Zone – The Ecological Zone in the southeastern part of the Area will be a landmark of the Lok Ma Chau Loop. In addition to compensating the reedbed affected by the development and preservation of the biodiversity of the Area, it also provides a buffer contributing to a transition between the developments in the Lok Ma Chau Loop and the surrounding rural landscape to its south.
- (d) Riverside Promenade Zone – The two kilometre long Riverside Promenade Zone offers panoramic view and long vistas across the Shenzhen River, and provides passive recreation opportunity to its users and a pleasant waterfront landscape setting for the educational, high-tech R&D and C&C uses. It also echoes with the future riverside area across the Shenzhen River.

## **4. Key Features of the OZP**

### ***Development Mix***

4.1 The overall planning intention is to develop the Lok Ma Chau Loop as the IT Park for three main uses, namely R&D, higher education, and C&C uses set

out both under the LMCL P&E Study and the 2017 MOU. In view of the rapid advancement of technology and complementary nature of the three main uses, a special “Other Specified Uses” annotated “Research and Development, Education, and Cultural and Creative Industries)” (“OU(R&D, Edu & C&C)”) zoning is proposed with the intention to allow a flexible mix of the development including research, design and development centre, creative industries, teaching and research facilities, offices, etc. It is considered that a mixed “OU” zoning would provide land use planning flexibility which is essential to meet the long-term development of Hong Kong.

- 4.2 The Lok Ma Chau Loop is entirely Government land and would be developed and managed by HKSTPC (or its subsidiary company for the IT Park). To take forward the IT Park development, HKSTPC has commenced its preparatory work, among others, to study the positioning and mode of operation of the IT Park. For the implementation, a master plan with development phasing/programme, detailed land uses and technical assessments would be submitted for Government’s approval. This implementation approach which is currently adopted by HKSTPC for the existing Science Park at Pak Shek Kok has been detailed in paragraph 14 of the ES (**Annex III of Appendix A**) for guiding the Lok Ma Chau Loop development.

#### ***Low to Medium-Rise Building Height Profile***

- 4.3 In order to respect the ecological and environmental considerations of the Area as well as to allow visual permeability and avoid monotonous visual appearance, developments within the Lok Ma Chau Loop would be in general of low to medium-rise (**Plan 9**). To minimize any potential impact on the birds’ flight paths, a graduated building height profile allowing for views and linkages across developments and into the surrounding hilly areas is adopted. In this regard, the building height is lowered towards the waterfront in the Lok Ma Chau Loop to respond to the natural settings along the Shenzhen River, then raised to attain a varied building height profile in the inner areas (from 46mPD to 54mPD) along the Pedestrian Boulevard, and gradually lowered again southwards to the Ecological Area (EA) for a smooth transition to the rural backdrop of Lok Ma Chau.
- 4.4 The building heights of respective sites have been assessed in the approved EIA. The Environmental Protection Department (EPD) has advised that as it forms part of the ecological mitigation measures stipulated in the approved EIA, the building height profile, together with other ecological mitigation measures, should be included in the Ecological Mitigation/Habitat Creation and Management Plan to be submitted under the EP. For any proposed variation to the Plan, the EP holder shall submit a Revised Plan to EPD for approval. Under the EIAO, EPD will seek advice from Agriculture, Fisheries and Conservation Department (AFCD) in considering the ecological matters in the Plan/Revised Plan. In view that the building height requirement is part of the ecological mitigation measures as set out in the approved EIA, it should be monitored under the EIAO. The building height profile has been elaborated in the relevant sections of the ES (**Annex III of**

**Appendix A)** for guidance.

***Pedestrian Boulevard in “OU(R&D, Edu & C&C)” Zone***

- 4.5 A special design feature of the Lok Ma Chau Loop development is the Pedestrian Boulevard running crosses northeast to southwest of this zone (**Plans 7 and 8**) and function as the spine of the Area where kiosks, benches, seating areas and landscaping areas would be provided to enhance street vibrancy. It would serve as a major activity corridor to create a diverse and vibrant public space and interconnect with other pedestrian linkages to key activity nodes and major public realm. To encourage retail-oriented frontages along the Pedestrian Boulevard and allow the Pedestrian Boulevard to act as a breezeway across the Area, low-rise developments in the form of commercial shop frontage and a maximum building height of 15mPD are proposed along the development sites abutting the Pedestrian Boulevard. This commercial shop frontage design could promote pedestrian experience and enhance air ventilation at street level. The detailed design and alignment of the Pedestrian Boulevard would be subject to further study. Nevertheless, the design should encourage people to congregate, enhance the landscape character and coverage of greenery of the site, and facilitate knowledge and culture exchange.

***Ecological Area for Provision of Compensatory Reedbeds***

- 4.6 To compensate for the loss of reedbed due to development of the Lok Ma Chau Loop, about 12.8 ha of land along the southeastern boundary of the Lok Ma Chau Loop has been earmarked as the EA for a purpose-built area of compensatory reed marsh habitat (**Plans 8 and 10**). The recreated reedbed thereat would help preserve the existing flight paths of birds and the terrestrial wildlife corridor connecting the Lok Ma Chau Loop with the adjacent rural habitats. The reed marsh will be established before total clearance of the existing reedbed in the Lok Ma Chau Loop and public access would be restricted to enhance its ecological value. In order to further limit levels of visual and noise disturbance to the reed marsh, there would be a 50m-wide buffer zone abutting the EA, which would constitute an area of passive recreational activity and limited development. CEDD in consultation with AFCD and relevant Government departments will formulate the detailed design and management of the EA.

***In-Situ Preservation of Existing Reedbeds***

- 4.7 About 3 ha of existing reedbeds in the central part of Planning Area 8 and within the EA in Planning Area 11 will be preserved in-situ (**Plans 8 and 10**). The retained reedbeds would be hydrologically linked to the EA and will have positive contribution towards enhancing the overall ecological and landscape values. Whilst the retained reedbeds in Planning Area 8 falls within an area designated for open space development, the concerned area is intended for more passive leisure and amenity purposes for the Lok Ma Chau Loop users and should be well-integrated into the design of the overall open space framework to its northwest. Use of native planting and boardwalk as access paths should integrate harmoniously with the natural context. The design

and facilities to be provided thereat should be further examined at the implementation stage.

## **5. Traffic and Transport Connections**

- 5.1 The Lok Ma Chau Loop will be connected with different parts of Hong Kong and the surrounding area by two main roads, namely the Western Connection Road (WCR) and the Eastern Connection Road (ECR) (**Plan 11**). The WCR, via widening/upgrading the existing Lok Ma Chau Road and Ha Wan Tsuen East Road will connect the western part of the Lok Ma Chau Loop to San Tin Highway.
- 5.2 Nevertheless, it is anticipated that the planned capacity of the WCR alone will not be able to accommodate the traffic generated by the Lok Ma Chau Loop upon its full implementation. In this regard, the ECR is proposed to link with the proposed road network of the KTN NDA. The environmental acceptability of the proposed ECR has yet to be established and a separate EIA study under the EIAO would need to be carried out upon review of the traffic condition after operation of the first phase of the Lok Ma Chau Loop development.
- 5.3 For rail transport, the Lok Ma Chau Loop users will have the choice of using the MTR Lok Ma Chau Station to access the rest of Hong Kong's railway network. Subject to detailed design, a direct link between the southwestern part of the Lok Ma Chau Loop and the MTR Lok Ma Chau Station would be provided. Besides, the proposed MTR Kwu Tung Station at KTN NDA will be another major transport node to the Lok Ma Chau Loop, the development of which is subject to further technical assessments/studies.
- 5.4 Two transport termini cum underground car parks and park-and-ride facilities are reserved at both sides of the Lok Ma Chau Loop which are close to the external connection roads. Local distributor roads will be provided to serve as the key internal vehicular transport route connecting with WCR and ECR (the later will be subject to further study and EIA approval). To achieve green community, road-based environmentally friendly transport modes may be introduced to serve the internal circular public transport route, subject to further study. Cycle tracks are planned along the waterfront of the Shenzhen River and the Old Shenzhen River Meander, the open space at the central part of the Lok Ma Chau Loop as well as the proposed WCR and ECR (subject to further study). Convenient cycle parking facilities would be provided near the major destinations and activity nodes.

## **6. Land Use Proposals**

- 6.1 The land use proposals as shown on the OZP are formulated on basis of the RODP. While the permitted uses and uses subject to planning approval, together with the development restrictions, if any, are set out in the Notes of the OZP, the planning intentions, objectives and planned development



parameters for various land use zonings of the OZP are described in more detail in the ES to provide further guidance for development (**Annex III of Appendix A**).

- 6.2 A summary of the land use proposals for the draft Lok Ma Chau Loop OZP is as follows:

<b>Zonings</b>	<b>Area (ha)</b>	<b>Area (%)</b>
“Commercial”	1.23	1.18%
“Government, Institution or Community”	3.95	3.79%
“Open Space”	18.18	17.46%
“Other Specified Uses”	53.49	51.37%
“Conservation Area”	16.34	15.69%
Major Road etc.	10.93	10.51%
<b>Total Area</b>	<b>104.12</b>	<b>100.0%</b>

“Commercial” (“C”)

- 6.3 About 1.23 ha (1.18%) of land are zoned “C” for commercial developments, which may include office, shop and services, place of entertainment, eating place and hotel, functioning mainly as commercial/shopping centre(s) serving the needs of the Lok Ma Chau Loop.
- 6.4 Two sites in Planning Areas 3 and 4 (**Plan 10**) are zoned “C” for providing a maximum total GFA of 48,000m<sup>2</sup> for commercial facilities supporting the Lok Ma Chau Loop development. These sites are located at the northern end of the Pedestrian Boulevard and could serve as one of the gateways of the Lok Ma Chau Loop development. A public transport terminus and underground car parking facilities would also be provided thereat to serve the future Lok Ma Chau Loop users. Considering the proximity of the fishponds of Hoo Hok Wai and the birds’ flight line, development on these two “C” sites should not exceed a maximum building height of 42mPD. The two “C” sites should be architecturally iconic with sensitive façade treatment and lighting design in order to minimize the possible adverse impacts on the wildlife nearby.

“Government, Institution or Community” (“G/IC”)

- 6.5 About 3.95 ha (3.79%) of land are zoned “G/IC”. The planning intention of this zone is primarily for the provision of Government, institution and community (GIC) facilities serving the needs of the Lok Ma Chau Loop and/or a wider district, region or the territory. It is also intended to provide land for uses directly related to or in support of the work of the Government,

organizations providing social services to meet community needs, and other institutional establishments.

- 6.6 GIC facilities under this zone include two electricity sub-stations in Planning Areas 6 and 13 to meet the needs of the Lok Ma Chau Loop and two district cooling systems (DCSs) in Planning Areas 4 and 13 to provide energy-efficient chilled water for use in surface and process cooling. Other government uses include police facilities and possible boundary crossing facilities in Planning Area 3, and a sub-divisional fire station cum ambulance depot in Planning Area 4. The planned maximum building heights for development in the “G/IC” zone are set out in the ES to meet their development and operational needs.

“Open Space” (“O”)

- 6.7 About 18.18 ha (17.46%) of land are zoned “O”. This zone is intended primarily for the provision of outdoor open-air public space for active and/or passive recreational uses serving the needs of the Lok Ma Chau Loop as well as the general public. A network of interconnected public open space of different sizes and functions would be provided.
- 6.8 Two sites at Planning Areas 2 and 12 are planned for the provision of district open space in the form of riverside promenade, whereas a portion of the site in Planning Area 12 and another site in Planning Area 3 will connect with the Pedestrian Boulevard running across the Area. The two kilometre long promenade along the riverbanks of the Shenzhen River and portions of the Old Shenzhen River Meander would provide a social and leisure waterfront environment for the development. In developing the detailed design of the district open space, further considerations should be given to making the best use of the natural resources to create a pleasant and attractive environment.
- 6.9 A large “O” zone is planned at the central part of the Area in Planning Areas 7 and 8 to create an enjoyable amenity space that connects the reedbed and people frequenting the Area. Planning Area 7 is intended mainly for the provision of outdoor open-air public space for recreational use as well as provision of a piazza, and/or outdoor events space. Planning Area 8 of about 3 ha adjoining the EA to the southeast is intended primarily for the preservation of the reedbed in-situ. The retained reedbed at the site should be integrated into the design of the open space in Planning Area 7 in the northwest and the EA immediately in the southeast for conserving the existing ecological and landscape resource as well as the provision of passive leisure and amenity space for the Lok Ma Chau Loop users. Use of native planting and boardwalk as access paths should integrate harmoniously with the natural context.

“Other Specified Uses” (“OU”)

- 6.10 About 53.49 ha (51.37%) of land are zoned “Other Specified Uses” (“OU”) for various specified uses. This zone covers land annotated for the following main uses:

- (a) “Research and Development, Education, and Cultural and Creative Industries” (“R&D, Edu & C&C”)
- (i) Five sites, with a total land area of about 38.6 ha, in Planning Areas 5, 6, 9, 10 and 12 are under this zone which is intended primarily for R&D, higher education, and C&C uses for promoting the development of the Lok Ma Chau Loop as a key base for scientific research, as well as higher education and C&C uses with a view to developing the Lok Ma Chau Loop as the IT Park. Complementary/supporting facilities such as retail, general office accommodation, and residential institution, etc. would also be provided within the zone. A public transport terminus and underground car parking facilities would be provided at the sites in Planning Areas 9 and 12.
  - (ii) Taking into consideration the rapid advancement of technology and their complementary nature of these three major uses, a flexible mix of the development is allowed which is subject to a maximum total GFA of 1,143,000m<sup>2</sup>. According to the approved EIA, development within the zone should generally be low to medium-rise with a stepped height ranging from 14mPD to 54mPD. In areas close to the EA, developments should not exceed a maximum building height of 14mPD. There is then an intermediate height zone of 26mPD and 38mPD before rising up to a building height of not exceeding 46mPD in the core area, and a building height of not exceeding 54mPD at a western corner site which serves as another gateway development in Planning Area 12 (**Plan 9**).
  - (iii) To further safeguard the EA and birds’ flight path, there is a low density and a low-rise building buffer zone of 50m in width from the EA, with appropriate screen planting, as set out in the EP and the EIA report. Within the 50m-wide buffer zone in the southern fringe of Planning Areas 6 and 10, all buildings should be placed in the 25m-wide area farther away from the EA in which developments should not exceed a maximum building height of 14mPD as set out in the EIA report. No developments are allowed within the 25m-wide area abutting the boundary of the EA.
  - (iv) To encourage people to congregate and facilitate knowledge and culture exchange among the Lok Ma Chau Loop users, a Pedestrian Boulevard and activity corridors are planned. A Pedestrian Boulevard running in a northeast to southwest direction in the central portion of the two “OU” sites in Planning Areas 5 and 9 would serve as a spine/major activity corridor to create a diverse and vibrant public space in the zone and act as a breezeway across the Area where kiosks, benches, seating areas and landscaping areas, etc. would be provided within the Pedestrian Boulevard for public enjoyment. Low-rise developments in a form of commercial shop frontage and a maximum building height of not exceeding 15mPD are proposed along the development sites abutting the Pedestrian Boulevard. This commercial shop frontage design could promote

pedestrian experience and enhance air ventilation at street level. Apart from the Pedestrian Boulevard, activity corridors in the form of local open space stretching in a northwest to southeast direction would be planned and provided within individual development sites of the “OU” zone to create a pleasant environment fostering interaction between users and enhance visual openness of the Lok Ma Chau Loop development. The detailed design and alignment of the Pedestrian Boulevard and activity corridors would be subject to further study.

(b) “Ecological Area” (“EA”)

About 12.8 ha of land in Planning Area 11 along the Old Shenzhen River Meander in the southeast of the Lok Ma Chau Loop is under this zone which is intended to provide/reserve land for creation of areas of reedbed compensating the habitat loss due to the development in the Lok Ma Chau Loop and providing movement corridor for birds and other wildlife connecting with the ecologically important areas to the east and west of the Lok Ma Chau Loop. During the wet seasons, it could also serve as a flood retention pond.

(c) “Sewage Treatment Works” (“STW”)

The “OU (STW)” site, with a land area of about 2.1 ha, is located in Planning Area 4 for the provision of a sewage treatment works to serve the Lok Ma Chau Loop development. The development of this site shall not exceed a maximum building height of 15mPD, subject to the detailed design of the sewage treatment works.

“Conservation Area” (“CA”)

- 6.11 About 16.34 ha (15.69%) of the Old Shenzhen River Meander to the southeast of the Lok Ma Chau Loop in Planning Area 1 is zoned “CA”. The planning intention of this zone is to protect and retain the existing natural landscape and ecological features of the Old Shenzhen River Meander and the associated riparian vegetation, which forms an important element of the flight line corridor for birds and is used by the Eurasian Otter, for conservation, educational and research purposes, and to separate sensitive natural environment from the adverse effects of development. There is a general presumption against development in this zone. In general, only developments that are needed to support the conservation of the ecological integrity of the wetland ecosystem or the existing natural landscape or scenic quality of the Old Shenzhen River Meander, or are essential infrastructure projects with overriding public interest may be permitted.
- 6.12 The area within this zone is used by Eurasian Otter (*Lutra lutra*) which is a rare mammal species in Hong Kong and of global conservation concern, and is the existing flight path for birds connecting the ecologically important areas to the east and west of the Lok Ma Chau Loop.
- 6.13 Diversion of stream, filling of land/pond or excavation of land may cause adverse drainage impacts on the adjacent areas and adverse impacts on the natural environment. In view of the conservation value of the area within

this zone, permission from the Board is required for such activities.

## **7. Notes of the Plan**

- 7.1 Attached to the draft OZP is a set of Notes that shows the types of uses or developments which are always permitted within the Area and other uses for which planning permission from the Board should be sought (**Annex II of Appendix A**). The provision for application for planning permission under section 16 of the Ordinance allows flexibility in land-use planning and control of development to meet the changing needs. Each proposal will be considered on its individual planning merits.
- 7.2 The draft Notes are formulated on the basis of the latest set of Master Schedule of Notes (MSN) endorsed by the Board. In view of the unique development nature of the Lok Ma Chau Loop, some additions to/deviation from the MSN are proposed to the Notes attached to the draft OZP at **Annex II of Appendix A**. A summary of the proposed additions to/deviations from the MSN is at **Appendix C**.

## **8. Plan Number**

Upon gazetting, the draft Lok Ma Chau Loop OZP will be renumbered as S/LMCL/1.

## **9. Implementation**

- 9.1 The OZP provides a broad land use framework. For the implementation of the Lok Ma Chau Loop as the IT Park, the HKSTPC/its subsidiary company will develop and manage the IT Park. The HKSTPC/its subsidiary company will conduct further studies to prepare a master plan for the Lok Ma Chau Loop development with development phasing/programme, detailed land uses and detailed design including the environmental and ecological measures proposed in the approved EIA and architectural design proposals, and confirm its technical feasibility. Necessary development and technical requirements for the development at the Area could be controlled through the lease (such as requirements for submission of master plan, detailed technical assessments and building set back, etc. as appropriate) and the Buildings Ordinance via building plan submission. A more detailed departmental ODP would be prepared in consultation with Government departments concerned. The ODP is a non-statutory plan which will be used as the basis for public works planning and site planning purpose. It includes information on detailed land uses, development parameters and boundaries of individual sites, green coverage, waterworks and drainage reserves, site formation levels and building height control, road alignment and dimensions, location of pedestrian facilities, public utility facilities as well as other building and engineering requirements.
- 9.2 CEDD is responsible for the detailed design and implementation of the site formation, land decontamination and environmental mitigation works and

provision of infrastructures within the Lok Ma Chau Loop and in the surrounding area. An implementation programme with phasing and packaging of works has been formulated under the LMCL P&E Study and the current phasing and packaging of works are shown in **Plan 11**, which is subject to further review by CEDD. The development of the “OU(EA)” site falls under the advance works package. Afterwards, part of the research and development and education facilities, supporting facilities including office, retail, hotel and a transport terminus as well as part of open space are scheduled as the first batch of facilities in Phase 1 of the Lok Ma Chau Loop development. The timing of construction of infrastructures including distributor roads, drainage and installation of utilities will be programmed at the detailed design stage to meet the demand for development in the Lok Ma Chau Loop.

- 9.3 Disposal of sites is undertaken by the Lands Department. Public works projects are coordinated by the CEDD in conjunction with the client departments and the works departments, such as the Highways Department and the Architectural Services Department. In the course of implementing the Plan, the North District Council (NDC) and Yuen Long District Council (YLDC) would also be consulted as and when appropriate.

## **10. Consultation**

- 10.1 The draft OZP together with the Notes and the ES have been circulated to the relevant Government bureaux and departments for comments.
- 10.2 The current draft OZP No. S/LMCL/E, together with its Notes and ES, which has incorporated relevant departmental comments where appropriate, has been considered and endorsed by the New Territories District Planning Conference by circulation as suitable for submission to the Board for consideration.
- 10.3 Subject to the Board’s agreement, the NDC, YLDC, Sheung Shui District Rural Committee and San Tin Rural Committee will be consulted on the draft OZP after its publication under section 5 of the Ordinance.

## **11. Decision Sought**

Members are invited to agree that:

- (a) the draft Lok Ma Chau Loop OZP No. S/LMCL/E (to be renumbered as S/LMCL/1) and its Notes (**Annexes I and II of Appendix A**) are suitable for exhibition for public inspection under section 5 of the Town Planning Ordinance (the Ordinance); and
- (b) the ES (**Annex III of Appendix A**) is suitable to serve as an expression of the planning intentions and objectives of the Board for various land use zonings of the draft Lok Ma Chau Loop OZP and that the ES should be issued under

the name of the Board.

## 12. **Attachments**

### ***Plans***

Plan 1	Recommended Outline Development Plan of the Lok Ma Chau Loop
Plan 2	Boundary of the draft Lok Ma Chau Loop OZP
Plan 3	Aerial Photo
Plan 4	UVA Photos
Plan 5	Site Photos of Existing Land Uses
Plan 6	Development Constraints and Opportunities
Plan 7	Land Use Framework
Plan 8	Overall Urban Design and Landscape Framework
Plan 9	Building Height Profile
Plan 10	Lok Ma Chau Loop Planning Areas
Plan 11	Phasing Plan for Lok Ma Chau Loop Development

### ***Appendices***

Appendix A	Annex I –	Draft Lok Ma Chau Loop Outline Zoning Plan No. S/LMCL/E
	Annex II –	Notes of the draft Lok Ma Chau Loop Outline Zoning Plan No. S/LMCL/E
	Annex III–	Explanatory Statement of the draft Lok Ma Chau Loop Outline Zoning Plan No. S/LMCL/E
Appendix B		Planning Report on Lok Ma Chau Loop
	Annex I –	Key Findings and Recommendations as well as the Information Digest of the LMCL P&E Study
	Annex II –	Lok Ma Chau Loop – Technical Review of Development Mix
Appendix C		Proposed Additions to, Deletions/Deviation from the Master Schedule of Notes for incorporation into the draft Lok Ma Chau Loop Outline Zoning Plan No. S/LMCL/E

土地用途 Land Uses	公頃 Hectares	%
E 教育 Education	22.8	26
R&D/C&C 其他指定用途 (高新科技研發/文化創意產業) Other Specified Uses (High-tech Research & Development / Cultural & Creative Industries)	8.2	9.4
R&D/C&C 其他指定用途 (高新科技研發/文化創意產業及運輸交匯處) Other Specified Uses (High-tech Research & Development / Cultural & Creative Industries cum Transport Interchange)	0.4	0.5
C 商業 Commercial	0.5	0.6
C/TI 商業及運輸交匯處 Commercial cum Transport Interchange	0.7	0.8
G 政府 (連可能相關過境設施) Government (with Possible Associated Boundary Crossing Facilities)	0.8	0.9
G/SW 政府 (污水處理廠) Government (Sewage Treatment Works)	2.1	2.4
G/F 政府 (消防局暨救護站) Government (Fire Station cum Ambulance Depot)	0.4	0.5
O 休憩用地 Open Space	10.6	12.1
A 美化地帶/活動走廊 Amenity / Activity Corridor	15.9	18.1
EA 其他指定用途 (生態區) Other Specified Uses (Ecological Area)	12.8	14.6
DCS 其他指定用途 (區域供冷系統) Other Specified Uses (District Cooling System)	1.6	1.8
ESS 其他指定用途 (變電站) Other Specified Uses (Electricity Sub-Station)	1.0	1.1
道路等 Roads, etc.	9.9	11.2
	87.7	100.0



來源：落馬洲河套地區發展規劃及工程研究 - 勘查研究  
Source: THE LMCL P&E STUDY

## 建議發展大綱圖 RECOMMENDED OUTLINE DEVELOPMENT PLAN

### 落馬洲河套地區發展 DEVELOPMENT OF LOK MA CHAU LOOP

本圖於2017年5月10日擬備  
PLAN PREPARED ON 10.5.2017

規劃署  
PLANNING  
DEPARTMENT



參考編號  
REFERENCE No.  
M/NE/17/21

圖 PLAN  
1





#### 圖例 LEGEND

- ① ◁ 航拍照片的觀景點  
VIEWING POINT OF UVA PHOTO
- [.] 主題地點 (界線只作識別用)  
SUBJECT SITE  
(BOUNDARY FOR IDENTIFICATION  
PURPOSE ONLY)

#### 位置圖 LOCATION PLAN

#### 落馬洲河套地區發展 DEVELOPMENT OF LOK MA CHAU LOOP

本摘要圖於2017年5月4日擬備，  
所根據的資料為地形圖組別  
HM20C圖則編號2  
EXTRACT PLAN PREPARED ON 4.5.2017  
BASED ON TOPOGRAPHIC MAP SERIES  
HM20C SHEET No. 2

SCALE 1 : 20 000 比例尺  
米 200 0 200 400 600 800 1 000 米  
METRES

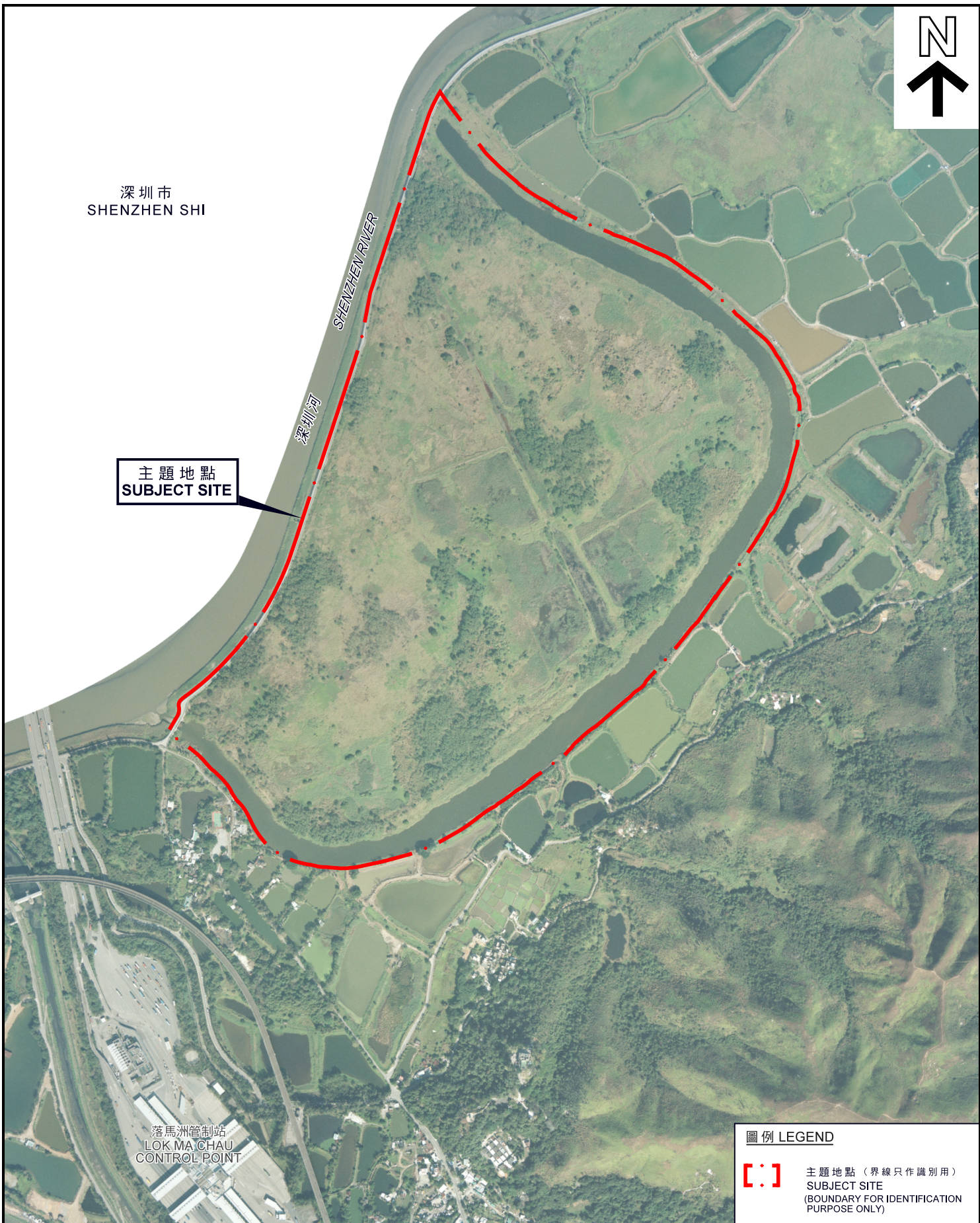
規劃署  
PLANNING  
DEPARTMENT



參考編號  
REFERENCE No.  
M/NE/17/21

圖 PLAN  
2





<p>本圖於2017年5月5日擬備， 所根據的資料為地政總署 於2015年1月14日拍得的航攝照片 編號CW111549R PLAN PREPARED ON 5.5.2017 BASED ON AERIAL PHOTO No. CW111549R TAKEN ON 14.1.2015 BY LANDS DEPARTMENT</p>	<p><u>航攝照片    AERIAL PHOTO</u></p> <p>落馬洲河套地區發展 DEVELOPMENT OF LOK MA CHAU LOOP</p>	<p>規 劃 署 PLANNING DEPARTMENT</p> 	
		<p>參考編號 REFERENCE No. M/NE/17/21</p>	<p>圖 PLAN 3</p>

圖 例 LEGEND



主 題 地 點 (界 線 只 作 識 別 用)  
SUBJECT SITE  
(BOUNDARY FOR IDENTIFICATION  
PURPOSE ONLY)





圖例 LEGEND

[ - ] 主題地點（界線只作識別用）  
SUBJECT SITE  
(BOUNDARY FOR IDENTIFICATION  
PURPOSE ONLY)

本圖於2017年5月4日擬備，  
所根據的資料為於2017年2月6日  
拍得的航拍照片  
PLAN PREPARED ON 4.5.2017  
BASED ON UVA PHOTOS TAKEN ON 6.2.2017

航拍照片 UVA PHOTOS

落馬洲河套地區發展  
DEVELOPMENT OF LOK MA CHAU LOOP

規 劃 署  
PLANNING  
DEPARTMENT



參考編號  
REFERENCE No.  
M/NE/17/21

圖 PLAN  
4





落馬洲支線邊境管制站  
LOK MA CHAU SPURLINE CONTROL POINT



落馬洲邊境管制站  
LOK MA CHAU CONTROL POINT

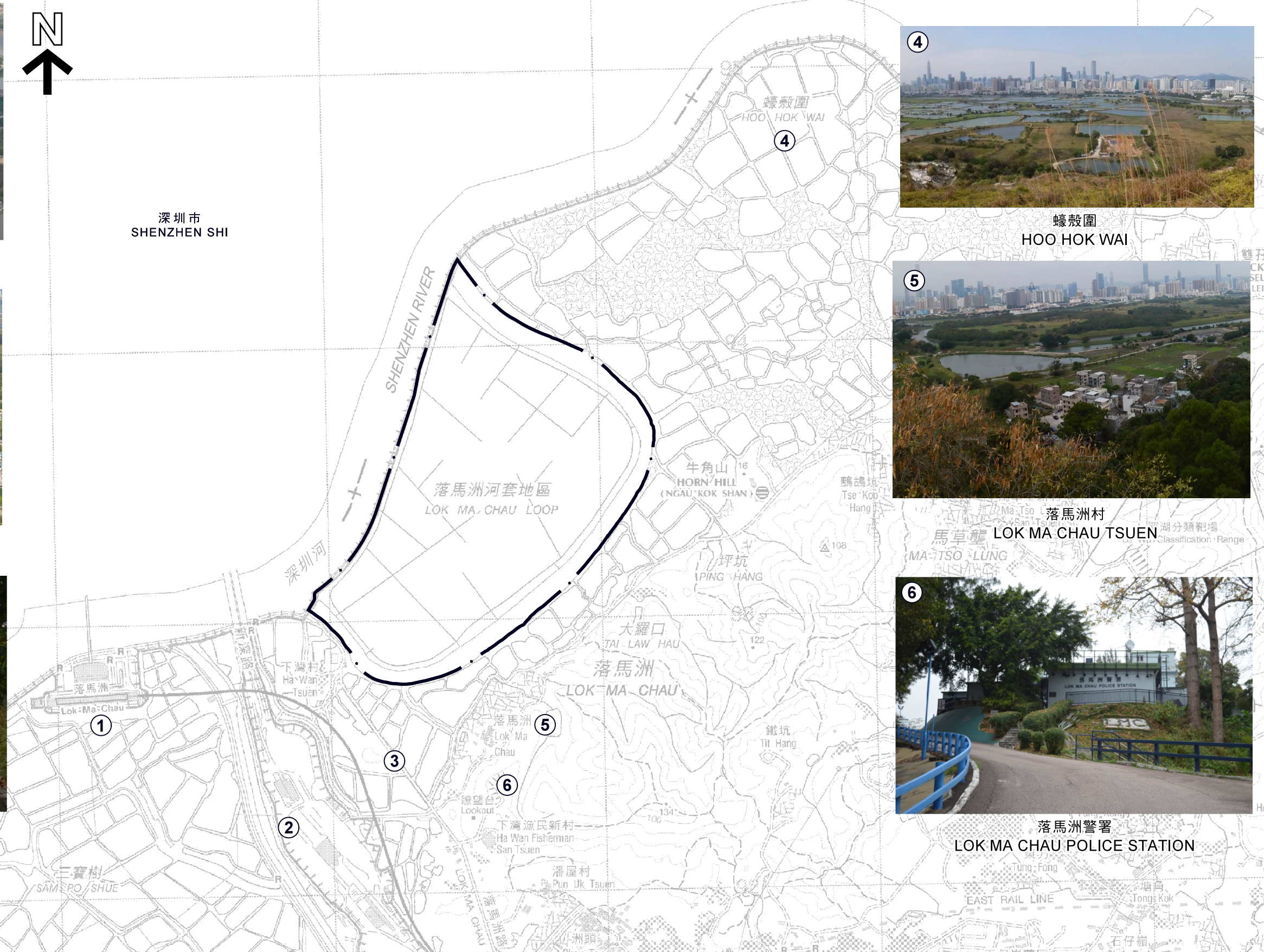


下灣村東路  
HA WAN TSUEN EAST ROAD

**圖例 LEGEND**  
[ ] 主題地點 (界線只作識別用)  
SUBJECT SITE  
(BOUNDARY FOR IDENTIFICATION  
PURPOSE ONLY)



深圳市  
SHENZHEN SHI



蠔殼圍  
HOO HOK WAI



落馬洲村  
LOK MA CHAU TSUEN



落馬洲警署  
LOK MA CHAU POLICE STATION

## 落馬洲河套地區發展 DEVELOPMENT OF LOK MA CHAU LOOP

### 現有土地用途的實地照片 SITE PHOTOS OF EXISTING LAND USES

本摘要圖於2017年5月10日擬備，  
所根據的資料為攝於2017年2月的實地照片及  
地形圖組別HM20C圖則編號2  
EXTRACT PLAN PREPARED ON 10.5.2017  
BASED ON SITE PHOTOS TAKEN IN FEBRUARY 2017 AND  
TOPOGRAPHIC MAP SERIES HM20C SHEET No. 2

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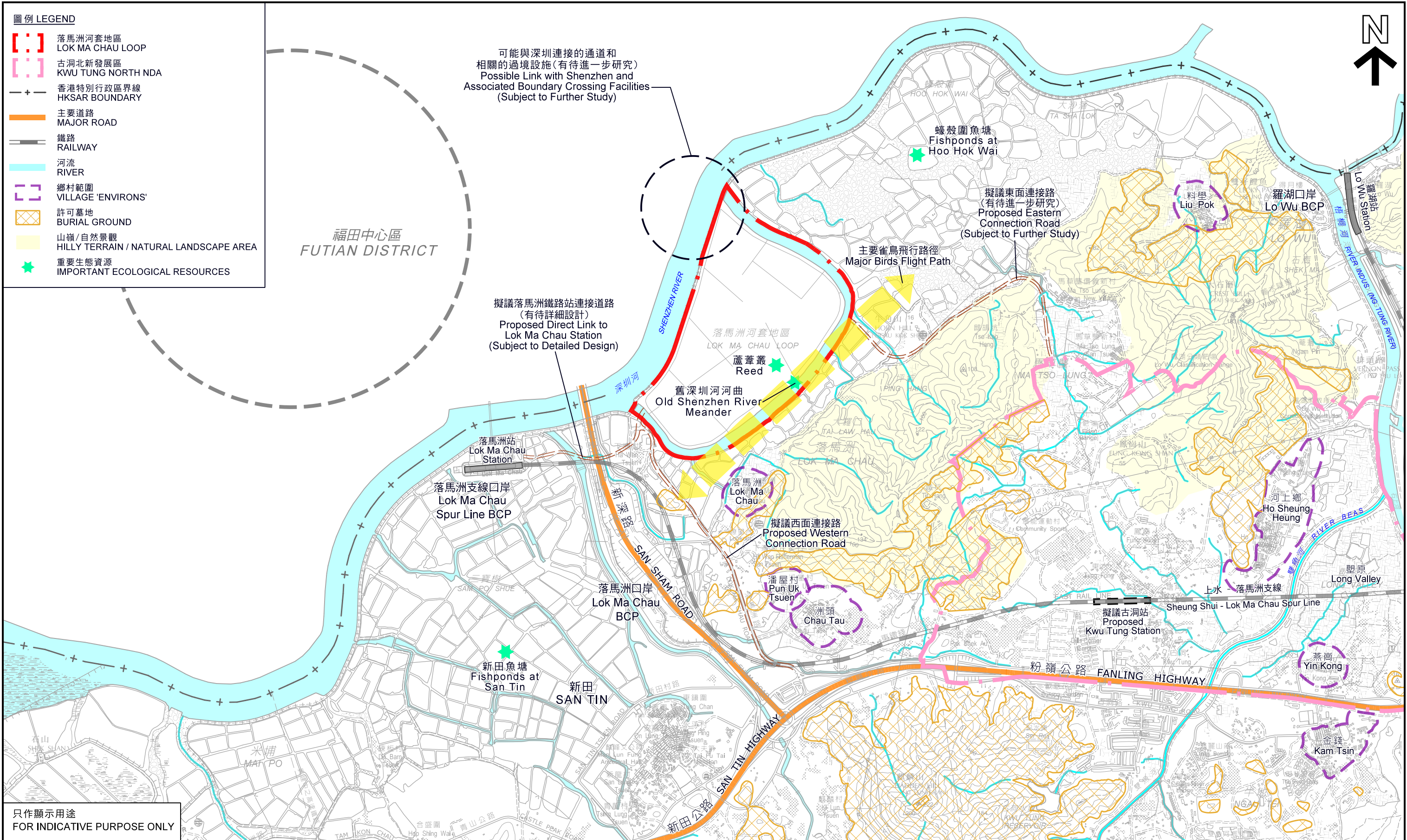
規劃署  
PLANNING  
DEPARTMENT



參考編號  
REFERENCE No.  
M/NE/17/21

圖 PLAN  
5





本摘要圖於2017年5月12日擬備，  
所根據的資料為地形圖組別  
HM20C圖則編號2  
EXTRACT PLAN PREPARED ON 12.5.2017  
BASED ON TOPOGRAPHIC MAP SERIES  
HM20C SHEET No. 2

## 落馬洲河套地區發展 DEVELOPMENT OF LOK MA CHAU LOOP

### 發展限制與機會 DEVELOPMENT CONSTRAINTS AND OPPORTUNITIES

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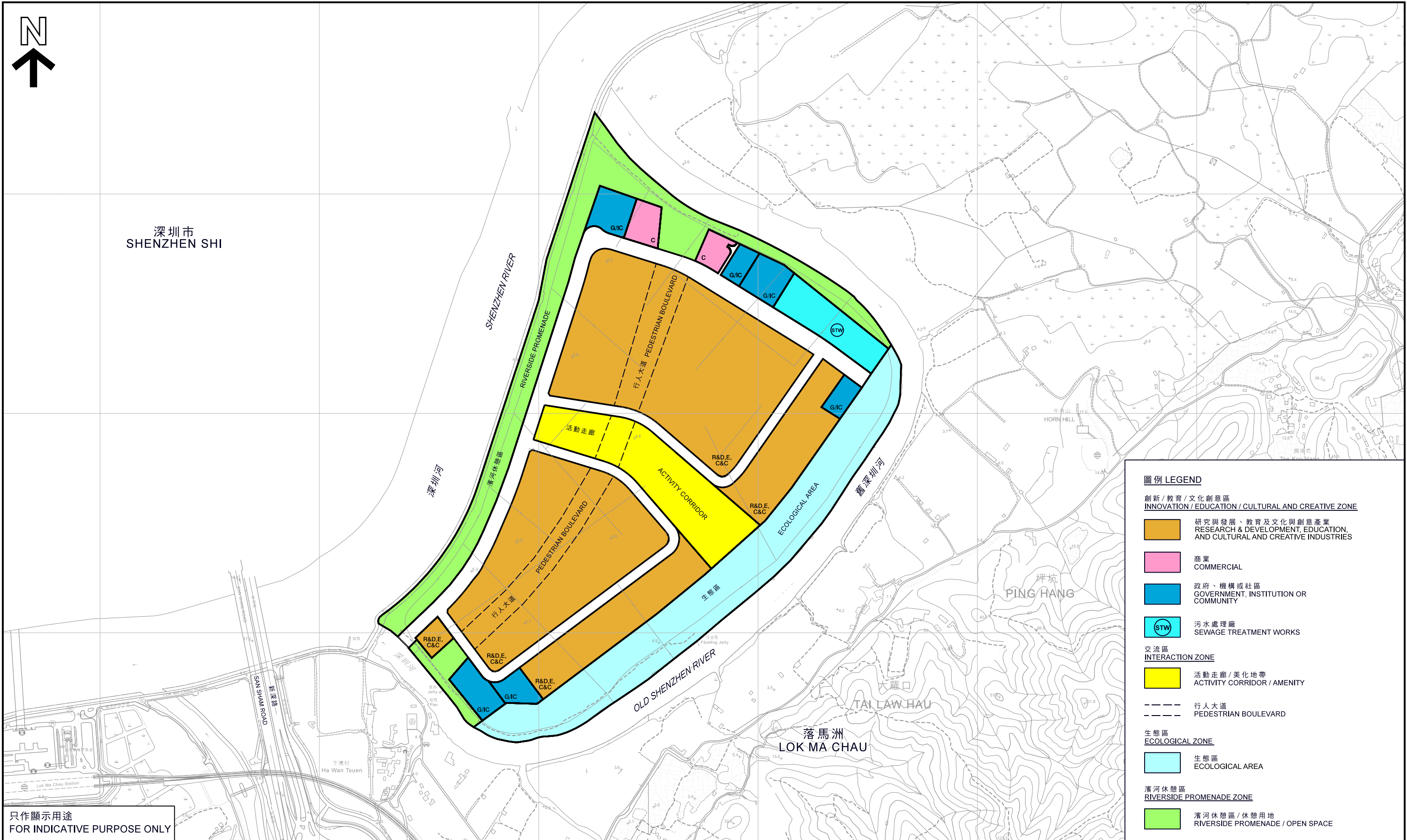
規劃署  
PLANNING  
DEPARTMENT



參考編號  
REFERENCE No.  
M/NE/17/21

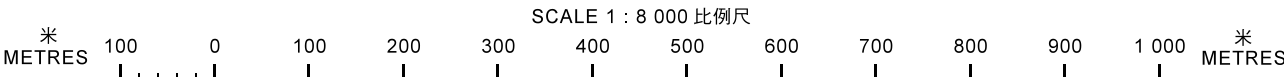
圖 PLAN  
6





只作顯示用途  
FOR INDICATIVE PURPOSE ONLY

落馬洲河套地區發展 DEVELOPMENT OF LOK MA CHAU LOOP  
土地用途大綱  
LAND USE FRAMEWORK



規 劃 署  
PLANNING  
DEPARTMENT



參考編號  
REFERENCE No.  
M/NE/17/21

圖 PLAN  
7

本摘要圖於2017年5月10日擬備，  
所根據的資料為地形圖組別HP5C圖則  
編號2-NE-C, 2-NE-D, 2-SE-A及2-SE-B  
EXTRACT PLAN PREPARED ON 10.5.2017  
BASED ON TOPOGRAPHIC MAP SERIES HP5C  
SHEETS No. 2-NE-C, 2-NE-D, 2-SE-A AND 2-SE-B



#### 圖例 LEGEND

- 河套地區範圍  
LOK MA CHAU LOOP BOUNDARY
- 發展用地 - 研究與發展、教育及文化與創意產業  
DEVELOPMENT SITE - RESEARCH AND DEVELOPMENT, EDUCATION, AND CULTURAL AND CREATIVE INDUSTRIES
- 發展用地 - 商業  
DEVELOPMENT SITE - COMMERCIAL
- 發展用地 - 基建及支援設施  
DEVELOPMENT SITE - INFRASTRUCTURAL AND SUPPORTING FACILITIES
- 門廊  
GATEWAY
- 蘆葦保育區  
RETENTION OF REED BED
- 主要道路  
MAIN ROAD
- 地區道路  
LOCAL ROAD
- 行人大道  
PEDESTRIAN BOULEVARD
- 主要通風廊道  
MAJOR BREEZEWAY
- 地區通風廊道  
LOCAL BREEZEWAY / AIR PATH
- 臨街商業廊帶  
COMMERCIAL SHOP FRONTAGE
- 主要聚集點  
PRIMARY FOCAL POINT
- 視覺走廊  
VIEW CORRIDOR
- 交通樞紐  
TRANSPORT HUB
- 生態區  
ECOLOGICAL AREA
- 美化地帶/活動走廊  
AMENITY / ACTIVITY CORRIDOR
- 水岸景觀緩衝區  
WATERFRONT LANDSCAPE GREEN BUFFER
- 與周邊地區的連接  
LINKAGE WITH SURROUNDING AREA
- 與周邊地區的連接 (有待進一步研究)  
LINKAGE WITH SURROUNDING AREA (SUBJECT TO FURTHER STUDY)

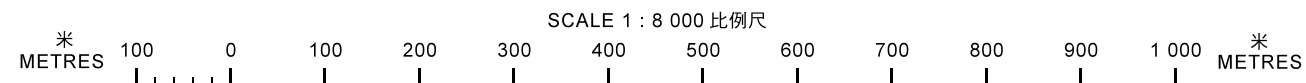
只作顯示用途  
FOR INDICATIVE PURPOSE ONLY

### 落馬洲河套地區發展 DEVELOPMENT OF LOK MA CHAU LOOP

#### 整體城市設計及園景大綱

#### OVERALL URBAN DESIGN AND LANDSCAPE FRAMEWORK

本摘要圖於2017年5月12日擬備，  
所根據的資料為地形圖組別HP5C圖則  
編號2-NE-C, 2-NE-D, 2-SE-A及2-SE-B  
EXTRACT PLAN PREPARED ON 12.5.2017  
BASED ON TOPOGRAPHIC MAP SERIES HP5C  
SHEETS No. 2-NE-C, 2-NE-D, 2-SE-A AND 2-SE-B



規 劃 署  
PLANNING  
DEPARTMENT



參考編號  
REFERENCE No.  
M/NE/17/21

圖 PLAN  
8



#### 圖例 LEGEND

- 河套地區範圍  
LOK MA CHAU LOOP BOUNDARY
- 地標  
LANDMARK
- 中層建築(在主水平基準以上38-54米)  
MEDIUM RISE BUILDING (38-54mPD)
- 低至中層建築(在主水平基準以上18-36米)  
LOW-TO-MEDIUM RISE BUILDING (18-36mPD)
- 低層建築(在主水平基準以上14-15米)  
LOW RISE BUILDING (14-15mPD)
- 生態區  
ECOLOGICAL AREA
- 美化地帶/活動走廊  
AMENITY / ACTIVITY CORRIDOR
- 水岸景觀緩衝區  
WATERFRONT LANDSCAPE GREEN BUFFER
- 道路  
ROAD
- 50米寬生態區邊界緩衝區  
50m-WIDE BUFFER ZONE FROM ECOLOGICAL AREA
- 內25米緩衝區  
INTERNAL 25m BUFFER ZONE
- 外25米緩衝區  
EXTERNAL 25m BUFFER ZONE

只作顯示用途  
FOR INDICATIVE PURPOSE ONLY

### 落馬洲河套地區發展 DEVELOPMENT OF LOK MA CHAU LOOP

#### 建築物高度概況 BUILDING HEIGHT PROFILE

本圖於2017年5月12日擬備  
PLAN PREPARED ON 12.5.2017

規 劃 署  
PLANNING  
DEPARTMENT



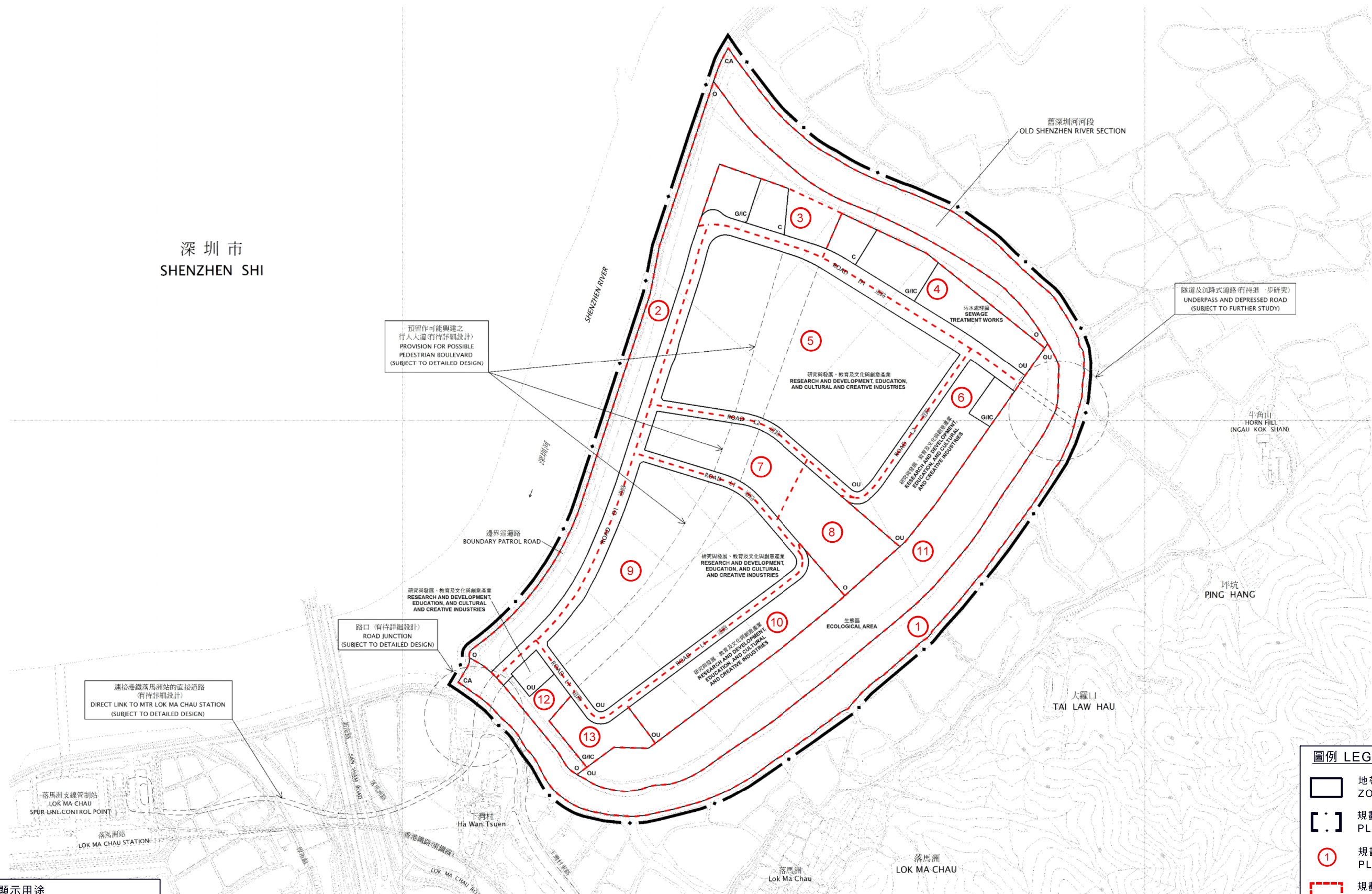
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REFERENCE No.  
M/NE/17/21

圖 PLAN  
9





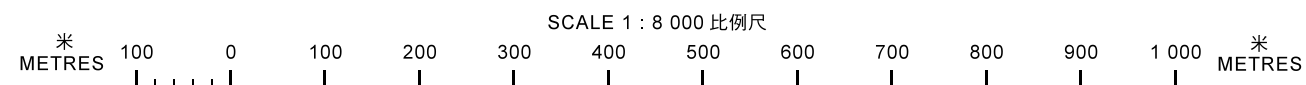
深圳市  
SHENZHEN SHI



只作顯示用途  
FOR INDICATIVE PURPOSE ONLY

落馬洲河套地區發展 DEVELOPMENT OF LOK MA CHAU LOOP  
落馬洲河套地區規劃區  
LOK MA CHAU LOOP PLANNING AREAS

本摘要圖於2017年5月11日擬備，  
所根據的資料為分區計劃大綱圖  
編號S/LMCL/E(製作中)  
EXTRACT PLAN PREPARED ON 11.5.2017  
BASED ON OUTLINE ZONING PLAN  
No. S/LMCL/E ( UNDER PREPARATION )



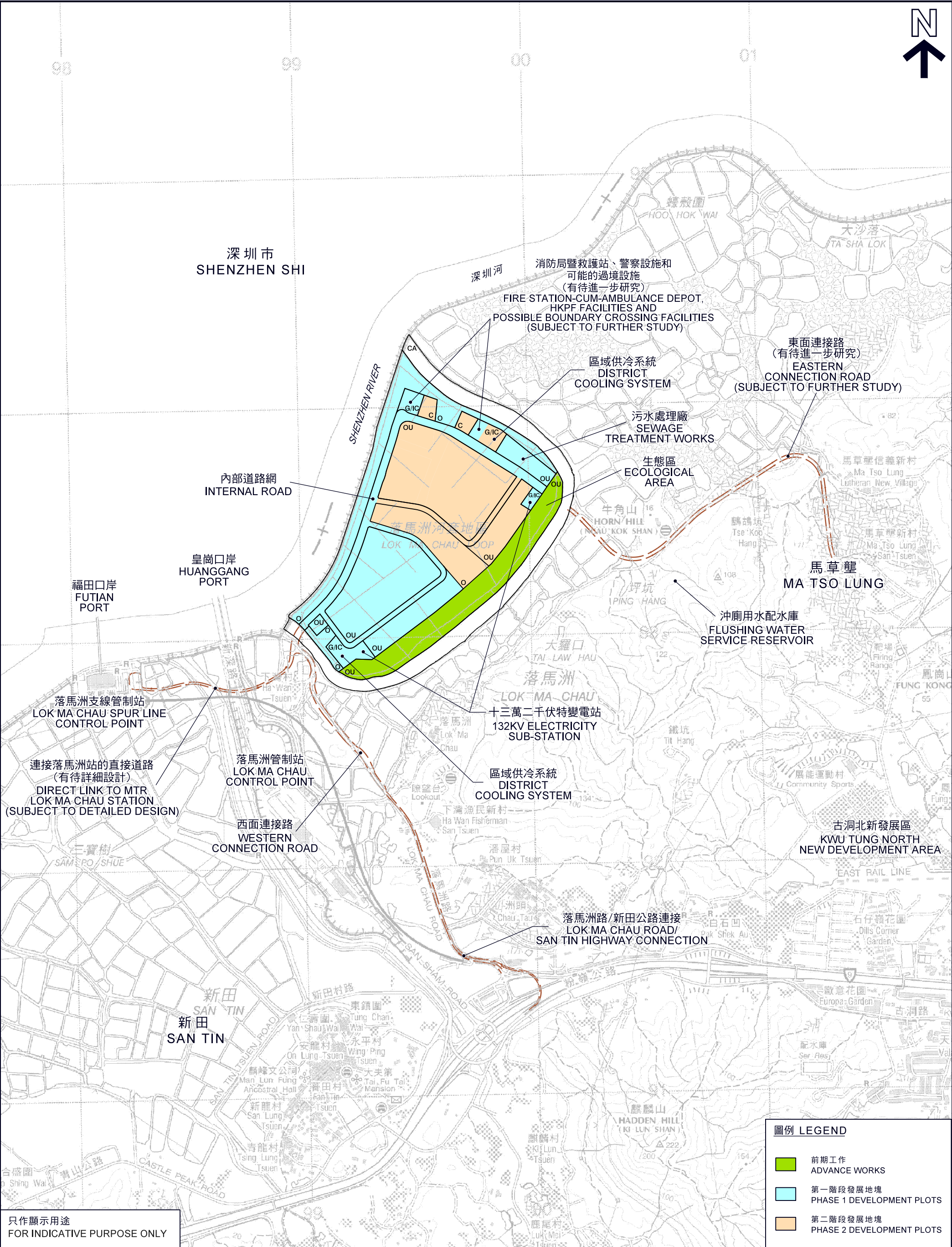
規 劃 署  
PLANNING  
DEPARTMENT



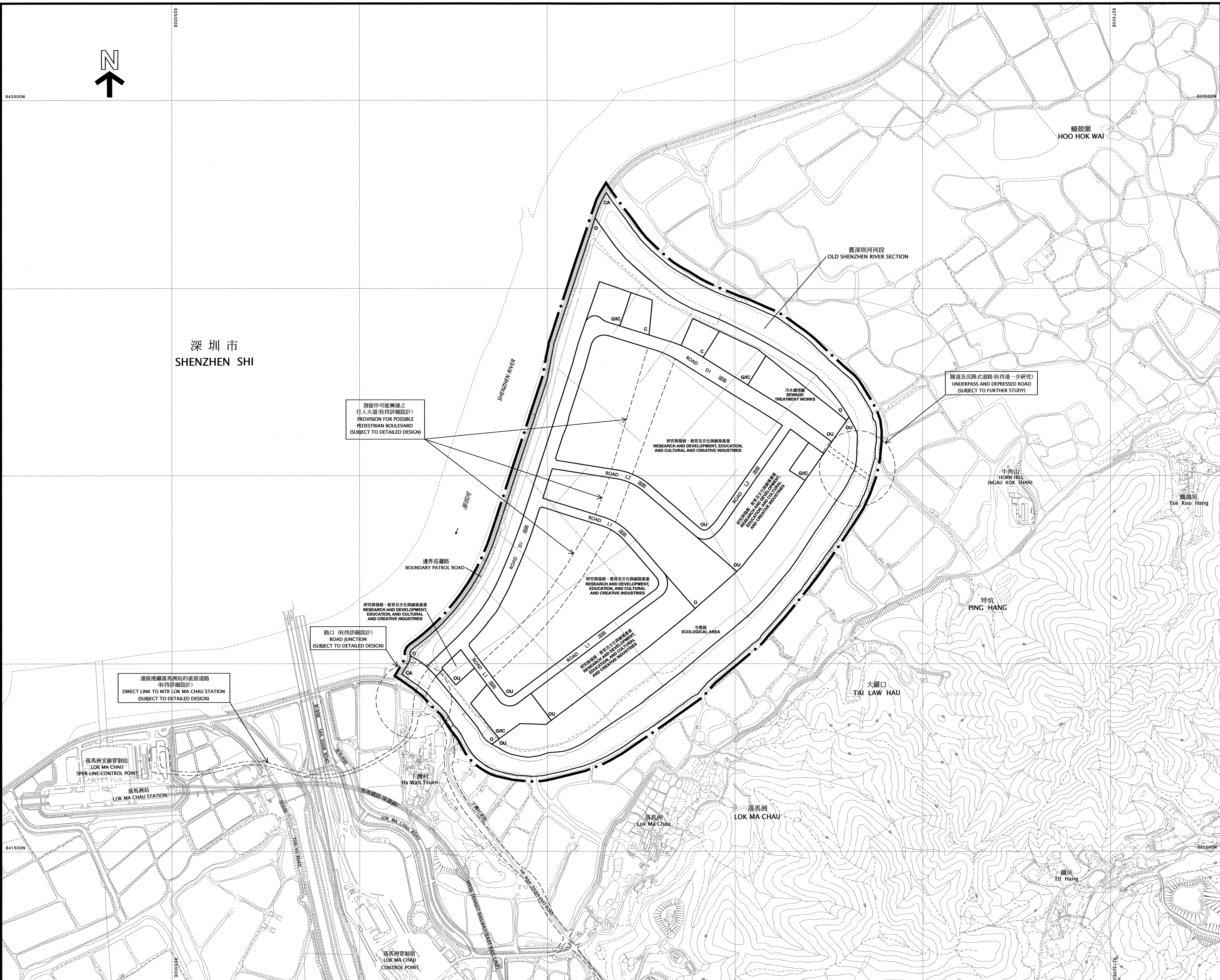
參考編號  
REFERENCE No.  
M/NE/17/21

圖 PLAN  
10









圖例  
NOTATION

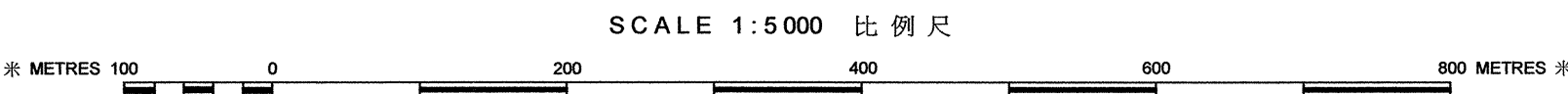
ZONES		地帶
COMMERCIAL	C	商業
GOVERNMENT, INSTITUTION OR COMMUNITY	GIC	政府、機構或社區
OPEN SPACE	O	休憩用地
OTHER SPECIFIED USES	OU	其他指定用途
CONSERVATION AREA	CA	自然保育區
COMMUNICATIONS		交通
MAJOR ROAD AND JUNCTION		主要道路及路口
MISCELLANEOUS		其他
BOUNDARY OF PLANNING SCHEME		規劃範圍界線

土地用途及面積一覽表  
SCHEDULE OF USES AND AREAS

USES	大約面積及百分比 APPROXIMATE AREA & %		用途
	公頃 HECTARES	% 百分比	
COMMERCIAL	1.23	1.18	商業
GOVERNMENT, INSTITUTION OR COMMUNITY	3.95	3.79	政府、機構或社區
OPEN SPACE	18.18	17.46	休憩用地
OTHER SPECIFIED USES	53.49	51.37	其他指定用途
CONSERVATION AREA	16.34	15.69	自然保育區
MAJOR ROAD ETC.	10.93	10.51	主要道路等
TOTAL PLANNING SCHEME AREA	104.12	100.00	規劃範圍總面積

夾附的《註釋》屬這份圖則的一部分  
THE ATTACHED NOTES ALSO FORM PART OF THIS PLAN

香港城市規劃委員會依據城市規劃條例擬備的落馬洲河套地區分區計劃大綱圖  
TOWN PLANNING ORDINANCE, HONG KONG TOWN PLANNING BOARD  
LOK MA CHAU LOOP - OUTLINE ZONING PLAN



規劃署遵照城市規劃委員會指示擬備  
PREPARED BY THE PLANNING DEPARTMENT UNDER  
THE DIRECTION OF THE TOWN PLANNING BOARD



圖則編號  
PLAN No. S/LMCL/E

**DRAFT LOK MA CHAU LOOP OUTLINE ZONING PLAN NO. S/LMCL/E**

(Being a Draft Plan for the Purposes of the Town Planning Ordinance)

**NOTES**

(N.B. These form part of the Plan)

- (1) These Notes show the uses or developments on land falling within the boundaries of the Plan which are always permitted and which may be permitted by the Town Planning Board, with or without conditions, on application. Where permission from the Town Planning Board for a use or development is required, the application for such permission should be made in a prescribed form. The application shall be addressed to the Secretary of the Town Planning Board, from whom the prescribed application form may be obtained.
- (2) Any use or development which is always permitted or may be permitted in accordance with these Notes must also conform to any other relevant legislation, the conditions of the Government lease concerned, and any other Government requirements, as may be applicable.
- (3)
  - (a) No action is required to make the existing use of any land or building conform to this Plan until there is a material change of use or the building is redeveloped.
  - (b) Any material change of use or any other development (except minor alteration and/or modification to the development of the land or building in respect of the existing use which is always permitted) or redevelopment must be always permitted in terms of the Plan or, if permission is required, in accordance with the permission granted by the Town Planning Board.
  - (c) For the purposes of subparagraph (a) above, “existing use of any land or building” means –
    - (i) before the publication in the Gazette of the notice of the first statutory plan covering the land or building (hereafter referred as ‘the first plan’),
      - a use in existence before the publication of the first plan which has continued since it came into existence; or
      - a use or a change of use approved under the Buildings Ordinance which relates to an existing building; and
    - (ii) after the publication of the first plan,
      - a use permitted under a plan which was effected during the effective period of that plan and has continued since it was effected; or

- a use or a change of use approved under the Buildings Ordinance which relates to an existing building and permitted under a plan prevailing at the time when the use or change of use was approved.
- (4) Except as otherwise specified by the Town Planning Board, when a use or material change of use is effected or a development or redevelopment is undertaken, as always permitted in terms of the Plan or in accordance with a permission granted by the Town Planning Board, all permissions granted by the Town Planning Board in respect of the site of the use or material change of use or development or redevelopment shall lapse.
- (5) Road junctions, alignments of roads and railway/tram tracks, and boundaries between zones may be subject to minor adjustments as detailed planning proceeds.
- (6) Temporary uses (expected to be 5 years or less) of any land or building are always permitted as long as they comply with any other relevant legislation, the conditions of the Government lease concerned, and any other Government requirements, and there is no need for these to conform to the zoned use or these Notes. For temporary uses expected to be over 5 years, the uses must conform to the zoned use or these Notes.
- (7) The following uses or developments are always permitted on land falling within the boundaries of the Plan except (a) where the uses or developments are specified in Column 2 of the Notes of individual zones or (b) as provided in paragraph (8) in relation to area zoned “Conservation Area” or “Other Specified Uses” annotated “Ecological Area”:
- (a) provision, maintenance or repair of plant nursery, amenity planting, open space, rain shelter, refreshment kiosk, road, transport terminus or station, bus/light rail/tram/public light bus stop or lay-by, cycle track, light rail track, railway station entrance, railway structure below ground level, taxi rank, nullah, public utility pipeline, electricity mast, lamp pole, telephone booth, telecommunications radio base station, automatic teller machine and shrine;
  - (b) geotechnical works, local public works, road works, sewerage works, drainage works, environmental improvement works, marine related facilities, waterworks (excluding works on service reservoir) and such other public works co-ordinated or implemented by Government; and
  - (c) maintenance or repair of watercourse and grave.
- (8) In areas zoned “Conservation Area” or “Other Specified Uses” annotated “Ecological Area”,
- (a) the following uses or developments are always permitted:
    - (i) maintenance or repair of plant nursery, amenity planting, sitting out area, rain shelter, refreshment kiosk, road, watercourse, nullah, public utility pipeline, electricity mast, lamp pole, telephone booth, shrine and grave; and

- (ii) geotechnical works, local public works, road works, sewerage works, drainage works, environmental improvement works, marine related facilities, waterworks (excluding works on service reservoir) and such other public works co-ordinated or implemented by Government; and
- (b) the following uses or developments require permission from the Town Planning Board:
  - provision of plant nursery, amenity planting, sitting out area, rain shelter, refreshment kiosk, footpath, public utility pipeline, electricity mast, lamp pole, telephone booth and shrine.
- (9) In any area shown as 'Road', all uses or developments except those specified in paragraph (7) above and those specified below require permission from the Town Planning Board:
  - on-street vehicle park, railway track and tram track.
- (10) Unless otherwise specified, all building, engineering and other operations incidental to and all uses directly related and ancillary to the permitted uses and developments within the same zone are always permitted and no separate permission is required.
- (11) In these Notes, "existing building" means a building, including a structure, which is physically existing and is in compliance with any relevant legislation and the conditions of the Government lease concerned.

**DRAFT LOK MA CHAU LOOP OUTLINE ZONING PLAN NO. S/LMCL/E**

Schedule of Uses

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CONSERVATION AREA	9

COMMERCIAL

Column 1 Uses always permitted	Column 2 Uses that may be permitted with or without conditions on application to the Town Planning Board
Ambulance Depot	Broadcasting, Television and/or Film Studio
Commercial Bathhouse/ Massage Establishment	Flat
Eating Place	Government Refuse Collection Point
Educational Institution	Hospital
Exhibition or Convention Hall	Petrol Filling Station
Government Use (not elsewhere specified)	Railway Vent Shaft and/or Other Structure above Ground Level other than Entrances
Hotel	Residential Institution
Information Technology and Telecommunications Industries	
Institutional Use (not elsewhere specified)	
Library	
Off-course Betting Centre	
Office	
Place of Entertainment	
Place of Recreation, Sports or Culture	
Private Club	
Public Clinic	
Public Convenience	
Public Transport Terminus or Station	
Public Utility Installation	
Public Vehicle Park (excluding container vehicle)	
Recyclable Collection Centre	
Religious Institution	
School	
Shop and Services	
Social Welfare Facility	
Training Centre	
Utility Installation for Private Project	
Wholesale Trade	

Planning Intention

This zone is intended primarily for commercial developments, which may include uses such as office, shop, services, place of entertainment, eating place and hotel, functioning mainly as commercial/shopping centre(s) serving the needs of the Lok Ma Chau Loop.



GOVERNMENT, INSTITUTION OR COMMUNITY

Column 1 Uses always permitted	Column 2 Uses that may be permitted with or without conditions on application to the Town Planning Board
Ambulance Depot	Animal Boarding Establishment
Animal Quarantine Centre (in Government building only)	Animal Quarantine Centre (not elsewhere specified)
Broadcasting, Television and/or Film Studio	Columbarium
Eating Place (Canteen, Cooked Food Centre only)	Correctional Institution
Educational Institution	Crematorium
Exhibition or Convention Hall	Driving School
Field Study/Education/Visitor Centre	Eating Place (not elsewhere specified)
Government Refuse Collection Point	Flat
Government Use (not elsewhere specified)	Funeral Facility
Hospital	Helicopter Landing Pad
Institutional Use (not elsewhere specified)	Helicopter Fuelling Station
Library	Holiday Camp
Market	Hotel
Place of Recreation, Sports or Culture	House
Public Clinic	Off-course Betting Centre
Public Convenience	Office
Public Transport Terminus or Station	Petrol Filling Station
Public Utility Installation	Place of Entertainment
Public Vehicle Park (excluding container vehicle)	Private Club
Recyclable Collection Centre	Radar, Telecommunications Electronic Microwave Repeater, Television and/or Radio Transmitter Installation
Religious Institution	Railway Vent Shaft and/or Other Structure above Ground Level other than Entrances
Research, Design and Development Centre	Refuse Disposal Installation (Refuse Transfer Station only)
School	Residential Institution
Service Reservoir	Sewage Treatment/Screening Plant
Social Welfare Facility	Shop and Services
Training Centre	Zoo
Utility Installation for Private Project	
Wholesale Trade	

(Please see next page)

GOVERNMENT, INSTITUTION OR COMMUNITY (Cont'd)

Planning Intention

This zone is intended primarily for the provision of Government, institution or community facilities serving the needs of the Lok Ma Chau Loop and/or a wider district, region or the territory. It is also intended to provide land for uses directly related to or in support of the work of the Government, organizations providing social services to meet community needs, and other institutional establishments.

OPEN SPACE

Column 1 Uses always permitted	Column 2 Uses that may be permitted with or without conditions on application to the Town Planning Board
Aviary Field Study/Education/Visitor Centre Park and Garden Pavilion Pedestrian Area Picnic Area Playground/Playing Field Promenade Public Convenience Public Vehicle Park (excluding container vehicle) (for cycles and underground vehicle park only) Sitting Out Area	Eating Place Government Refuse Collection Point Government Use (not elsewhere specified) Holiday Camp Pier Place of Entertainment Place of Recreation, Sports or Culture Private Club Public Transport Terminus or Station Public Utility Installation Public Vehicle Park (excluding container vehicle) (not elsewhere specified) Railway Vent Shaft and/or Other Structure above Ground Level other than Entrances Religious Institution Service Reservoir Shop and Services Tent Camping Ground Utility Installation for Private Project

Planning Intention

This zone is intended primarily for the provision of outdoor open-air public space for active and/or passive recreational uses serving the needs of the Lok Ma Chau Loop as well as the general public.

OTHER SPECIFIED USES

Column 1 Uses always permitted	Column 2 Uses that may be permitted with or without conditions on application to the Town Planning Board
<u>For “Research and Development, Education, and Cultural and Creative Industries” Only</u>	
Ambulance Depot	Dangerous Goods Godown
Broadcasting, Television and/or Film Studio	Flat (not elsewhere specified)
Cargo Handling and Forwarding Facilities	Gas Works
Creative Industries	Helicopter Landing Pad
Eating Place	Hospital
Educational Institution	Industrial Use (not elsewhere specified)
Exhibition or Convention Hall	Railway Vent Shaft and/or Other Structure above Ground Level other than Entrances
Flat (Staff Quarters only)	Service Industries (not elsewhere specified)
Government Refuse Collection Point	Wholesale Trade
Government Use (not elsewhere specified)	
Hotel	
Information Technology and Telecommunications Industries	
Institutional Use (not elsewhere specified)	
Library	
Material Recovery Facility	
Office	
Petrol Filling Station	
Place of Entertainment	
Place of Recreation, Sports or Culture	
Private Club	
Public Clinic	
Public Convenience	
Public Transport Terminus or Station	
Public Utility Installation	
Public Vehicle Park	
Radar, Telecommunications Electronic Microwave Repeater, Television and/or Radio Transmitter Installation	
Recyclable Collection Centre	
Refuse Disposal Installation	
Religious Institution	
Research, Design and Development Centre	
Residential Institution	
School	

(Please see next page)

OTHER SPECIFIED USES (Cont'd)

Column 1	Column 2
Uses always permitted	Uses that may be permitted with or without conditions on application to the Town Planning Board

For “Research and Development, Education, and Cultural and Creative Industries” Only  
(Cont'd)

Shop and Services  
Social Welfare Facility  
Training Centre  
Utility Installation for Private Project  
Warehouse (excluding Dangerous Goods  
Godown)

Planning Intention

This zone is intended primarily for research and development, higher education, and cultural and creative industries uses for promoting the development of the Lok Ma Chau Loop as a key base for scientific research, as well as higher education, cultural and creative and other complementary facilities.

(Please see next page)

OTHER SPECIFIED USES (Cont'd)

Column 1	Column 2
Uses always permitted	Uses that may be permitted with or without conditions on application to the Town Planning Board

For "Ecological Area" Only

Nature Reserve	Field Study/Education/Visitor Centre
Wetland Habitat	Government Refuse Collection Point
Wild Animals Protection Area	Government Use (not elsewhere specified)
	Nature Trail
	Public Convenience
	Public Utility Installation

Planning Intention

This zone is intended primarily to provide/reserve land for the creation of areas of reedbed for compensating the habitat loss due to the development in the Lok Ma Chau Loop and providing movement corridor for birds and other wildlife connecting with the ecologically important areas to the east and west of the Lok Ma Chau Loop.

(Please see next page)

OTHER SPECIFIED USES (Cont'd)

Column 1	Column 2
Uses always permitted	Uses that may be permitted with or without conditions on application to the Town Planning Board

For "Sewage Treatment Works" Only

As Specified on the Plan

Government Use (not elsewhere specified)  
Public Utility Installation  
Utility Installation for Private Project

Planning Intention

This zone is intended for the development of sewage treatment works to serve the Lok Ma Chau Loop development.

CONSERVATION AREA

Column 1 Uses always permitted	Column 2 Uses that may be permitted with or without conditions on application to the Town Planning Board
Agricultural Use (Fish Pond Culture only) Nature Reserve Nature Trail Wetland Habitat Wild Animals Protection Area	Field Study/Education/Visitor Centre Government Use (not elsewhere specified) Pier Public Convenience Public Utility Installation

Planning Intention

This zone is intended to protect and retain the existing natural landscape and ecological features of the Old Shenzhen River Meander and the associated riparian vegetation, which forms an important element of the flight line corridor for birds and is used by the Eurasian Otter, for conservation, educational and research purposes, and to separate sensitive natural environment from the adverse effects of development.

There is a general presumption against development in this zone. In general, only developments that are needed to support the conservation of the ecological integrity of the wetland ecosystem or the existing natural landscape or scenic quality of the Old Shenzhen River Meander or are essential infrastructure projects with overriding public interest may be permitted.

Remarks

Any diversion of stream, filling of land/pond or excavation of land, including that to effect a change of use to any of those specified in Columns 1 and 2 above or the uses or developments always permitted under the covering Notes, shall not be undertaken or continued on or after the date of the first publication in the Gazette of the notice of the draft Lok Ma Chau Loop Outline Zoning Plan No. S/LMCL/1 without the permission from the Town Planning Board under section 16 of the Town Planning Ordinance.



**DRAFT LOK MA CHAU LOOP OUTLINE ZONING PLAN NO. S/LMCL/E**

**EXPLANATORY STATEMENT**

**DRAFT LOK MA CHAU LOOP OUTLINE ZONING PLAN NO. S/LMCL/E**

**EXPLANATORY STATEMENT**

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## **DRAFT LOK MA CHAU LOOP OUTLINE ZONING PLAN NO. S/LMCL/E**

(Being a Draft Plan for the Purposes of the Town Planning Ordinance)

### **EXPLANATORY STATEMENT**

N.B.: For the purposes of the Town Planning Ordinance, this statement shall not be deemed to constitute a part of the Plan.

#### **1. INTRODUCTION**

This Explanatory Statement is intended to assist an understanding of the draft Lok Ma Chau Loop Outline Zoning Plan (OZP) No. S/LMCL/E. It reflects the planning intentions and objectives of the Town Planning Board (the Board) for the various land use zonings of the Plan.

#### **2. AUTHORITY FOR THE PLAN AND PROCEDURE**

- 2.1 On 5 November 2013, under the power delegated by the Chief Executive (CE), the Secretary for Development directed the Board, under section 3(1)(a) of the Town Planning Ordinance (the Ordinance) to prepare a draft outline zoning plan for the Lok Ma Chau Loop area.
- 2.2 On \_\_\_\_\_, the draft Lok Ma Chau Loop OZP No. S/LMCL/1 (the Plan) was exhibited for public inspection under section 5 of the Ordinance.

#### **3. OBJECT OF THE PLAN**

- 3.1 The object of the Plan is to indicate the broad land use zonings and major transport networks for the Lok Ma Chau Loop area so that the development and redevelopment within the area can be put under statutory planning control. It also provides the planning framework for preparing more detailed non-statutory plans which form the basis for public works planning and site reservation for various uses.
- 3.2 The Plan is to illustrate the broad principles of development and planning control only. It is a small-scale plan and the road alignments and boundaries between the land use zones may be subject to minor adjustments as detailed planning and development proceed.
- 3.3 Since the Plan is to show broad land use zonings, there would be situations in which small strips of land not intended for building development purposes and carry no development right under the lease, such as the areas restricted for garden, slope maintenance and access road purposes, are included in the development zones. The general principle is that such areas should not be taken into account in plot ratio and site coverage calculation. Development within these zones should be restricted to building lots carrying development right in order to

maintain the character and amenity of the Lok Ma Chau Loop area and not to overload the road network in this area.

#### **4. NOTES OF THE PLAN**

- 4.1 Attached to the Plan is a set of Notes which shows the types of uses or developments which are always permitted within the Planning Scheme Area and in particular zones and which may be permitted by the Board, with or without conditions, on application. The provision for application for planning permission under section 16 of the Ordinance allows greater flexibility in land use planning and control of development to meet changing needs.
- 4.2 For the guidance of the general public, a set of definitions that explains some of the terms used in the Notes may be obtained from the Technical Services Division of the Planning Department and can be downloaded from the Board's website at <http://www.info.gov.hk/tpb>.

#### **5. THE PLANNING SCHEME AREA**

- 5.1 The Planning Scheme Area (the Area) covers an area of about 104 hectares (ha) and is comprised of the land area of Lok Ma Chau Loop of about 87.7 ha and the meander section of the Old Shenzhen River of about 16.3 ha. The Lok Ma Chau Loop was originally within the administrative boundary of Shenzhen. In accordance with Order No. 221 of the State Council of the People's Republic of China promulgated on 1 July 1997, after the training of the Shenzhen River, the boundary will follow the new centre line of the river. The Lok Ma Chau Loop, originally within the administrative boundary of Shenzhen, has since been included within the administrative boundary of the Hong Kong Special Administrative Region (HKSAR).
- 5.2 The Area is located in a transition zone between the highly urbanized commercial/residential development in Shenzhen and the rural hinterland of Hong Kong. It is bounded by the bank of Shenzhen River in the northwest, fishponds of Hoo Hok Wai in the northeast, Lok Ma Chau and Tai Law Hau in the south, the Lok Ma Chau Control Point and Lok Ma Chau Spur Line Control Point in the southwest, as well as the Mai Po Nature Reserve in the further southwest. To the further north, across the Shenzhen River, is the Futian commercial area and Huanggang Port of Shenzhen. The Kwu Tung North New Development Area (KTN NDA) is located approximately 920m to the southeast of the Lok Ma Chau Loop. The boundary of the Area is shown by a heavy broken line on the Plan. For planning and reference purposes, the Area is sub-divided into a number of smaller planning areas as shown on the Plan (**Figure 1**).

## **6. STRATEGIC PLANNING CONTEXT**

### ***Lok Ma Chau Loop – Planning and Engineering Study***

- 6.1 In the 2007-2008 Policy Address, the development at Lok Ma Chau Loop was one of the ten major infrastructure projects for economic growth in Hong Kong. In March 2008, the ‘Hong Kong-Shenzhen Joint Task Force on Boundary District Development’ under the ‘Hong Kong/Shenzhen Co-operation Meeting’ agreed that both sides would conduct a joint comprehensive study on the development of the Lok Ma Chau Loop under the principle of ‘co-study, co-development and mutual benefit’. From June to July 2008, the governments of both sides conducted public engagement on the possible future land use of the Lok Ma Chau Loop. The outcomes indicated that higher education, high-tech research and development (R&D) as well as cultural and creative industries (C&C) received more support by the public of both places.
- 6.2 In June 2009, ‘the Planning and Engineering Study on Development of Lok Ma Chau Loop’ (the LMCL P&E Study) was jointly commissioned by the Civil Engineering and Development Department (CEDD) and the Planning Department. In the Stage 1 Public Engagement of the LMCL P&E Study held between November 2010 and January 2011, the public generally accepted the proposed land uses, and agreed that the superior location of the Lok Ma Chau Loop should be capitalized to enhance the co-operation between Hong Kong and Shenzhen, and a balance between conservation and development should be struck under the principle of sustainable development. In the Stage 2 Public Engagement of the LMCL P&E Study held from May to July 2012, public opinion was collected in respect of the draft Recommended Outline Development Plan (RODP) for the Lok Ma Chau Loop. The public generally had no objection to the land uses proposed in the draft RODP.
- 6.3 Following the two stages of Public Engagement, planning study and detailed technical assessments were carried out and the RODP for the Lok Ma Chau Loop was finalized. The RODP and the recommendations of the LMCL P&E Study were publicized in Hong Kong and Shenzhen through an Information Digest in July 2013. The LMCL P&E Study was completed in full in end 2014. In October 2013, the Environment Impact Assessment (EIA) Report for the Lok Ma Chau Loop development was approved with conditions pursuant to the Environmental Impact Assessment Ordinance (EIAO). The Environmental Permit was also granted in November 2013.

### ***Policy Direction: Hong Kong-Shenzhen Innovation and Technology Park***

- 6.4 On 3 January 2017, a “Memorandum of Understanding on Jointly Developing the Lok Ma Chau Loop by Hong Kong and Shenzhen” (2017 MOU) was signed between the Hong Kong and Shenzhen Governments, agreeing to jointly develop the Lok Ma Chau Loop as the Hong Kong-Shenzhen Innovation and Technology Park (IT Park), setting up a key base for scientific research, as well as relevant higher education, cultural and creative and other complementary facilities. Under the 2017 MOU, the HKSAR Government will be responsible for constructing the necessary infrastructures within the Lok Ma Chau Loop and its

surrounding area, and will lease the formed land in the Lok Ma Chau Loop to the Hong Kong Science and Technology Parks Corporation (HKSTPC) for the development of the IT Park. HKSTPC will set up a wholly-owned subsidiary company (the project proponent) which will be vested with the responsibility to build the superstructure of the IT Park, as well as to operate, maintain and manage the same.

- 6.5 A key base for co-operation in top-notch scientific research will be established in the IT Park. Through liaising with top-tier enterprises, R&D institutions and higher education institutions in the Mainland and overseas, a base for co-operation in scientific research will be established for exchanging and co-operating with international research talents. Based on the existing research strengths and development needs of Hong Kong, potential areas for development that could be considered include robotics, biomedicine, smart city and Fintech. However, due to the rapid advancement of technology, these development areas will have to be further reviewed with regard to the situation and needs of the latest economic developments at that time.
- 6.6 The 2017 MOU also states that an ‘Integrated Advanced Training Platform’ will be set up in the IT Park through soliciting proposals from the world’s top higher education institutions (including higher education institutions in Hong Kong, the Mainland and overseas) for operating branches or new institutions in the IT Park. These branches or new institutions will focus on the provision of postgraduate programmes and professional training courses on new or advanced technology, aiming to nurture talents and engender synergy and clustering effects with the facilities in the IT Park. Relevant cultural and creative supporting facilities will also be provided to complement with the scientific projects and activities in the IT Park.
- 6.7 The IT Park will provide a maximum total gross floor area (GFA) of 1.2 million m<sup>2</sup> for flexible allocation for R&D, higher education and C&C uses, where appropriate. Land will also be reserved for commercial, and government, institution and community facilities to support the development at the Lok Ma Chau Loop. HKSTPC shall conduct a consultancy study to examine, among others, the positioning, mode of operations as well as the superstructure planning of the IT Park.

## **7. POPULATION**

There is currently no population in the Area and no development has been established yet. It is estimated that the planned working/student population in the Lok Ma Chau Loop will be in the range of 50,000 to 53,000.

## **8. OPPORTUNITIES AND CONSTRAINTS**

### **8.1 *Opportunities***

#### ***Locational Advantages***

- 8.1.1 The Lok Ma Chau Loop is located at the Hong Kong/Shenzhen boundary district which is in close proximity to the Lok Ma Chau Control Point and Lok Ma Chau Spur Line Control Point of Hong Kong as well as the Huanggang Port and Futian commercial area of Shenzhen. The geographical location of the Lok Ma Chau Loop enjoys strategic advantages which can facilitate complementary co-operation with Shenzhen. The development of the IT Park in the Lok Ma Chau Loop can facilitate I&T enterprises to leverage on Shenzhen's strong production facilities for mass production and tap into the huge Mainland market, enhancing economic benefits by expanding the production scale.
- 8.1.2 The Lok Ma Chau Loop is also located near the KTN NDA and areas with development potentials in New Territories North in Hong Kong, as well as the commercial areas in Shenzhen. The development of the Lok Ma Chau Loop can bring an important synergy and give impetus to these adjacent areas and the territory, while these areas can provide supporting facilities and services, talents, customers and markets. The development can also foster a tech-ecosystem for high-technology and knowledge-based industries in the northeastern part of Hong Kong.

#### ***Sustainable, Smart and Green Community***

- 8.1.3 The land area of the Lok Ma Chau Loop (about 87.7 ha) is about four times that of the Hong Kong Science Park in Pak Shek Kok. It will be Hong Kong's largest I&T platform for convergence of top-notch international I&T talents. Besides, it is a new development site and has the flexibility and opportunities for adoption of various smart and green initiatives such as a well-planned information and communications technology infrastructure network, smart, green and resilient infrastructure including innovative and highly efficient energy and water installations, reuse of treated sewage effluent, district cooling system, green transport and green buildings etc. in the planning and design to create a smart and green community.

#### ***Traffic and Transport***

- 8.1.4 Being in close proximity to the San Tin Highway, Fanling Highway, San Tin Interchange, and the Lok Ma Chau Station of the Mass Transit Railway (MTR) East Rail Line, there are opportunities for the provision of an integrated transport system in the Area as a whole to enhance the connectivity and mobility, including the provision of direct road linkage between the Lok Ma Chau Loop and the KTN NDA (subject to further study) and promotion of sustainable transportation.

### Socio-economic

- 8.1.5 The Lok Ma Chau Loop development can meet the different socio-economic needs by creating an intimate environment conducive to interaction among research, education and creative activities, providing a sustainable and high quality business and research environment, providing employment and business opportunities, as well as providing an integrated infrastructure system and improving the overall character of the Area. The cultural heritage resources in the surrounding area also have the potential for heritage tourism and heritage promotion.

### Nature and Landscape

- 8.1.6 The physical setting of the Lok Ma Chau Loop is unique comprising an extensive piece of flatland surrounded by the realigned Shenzhen River and the Old Shenzhen River Meander. Fishponds and wetland are found in the surrounding area like Hoo Hok Wai and San Tin with the backdrop of the vegetated ridges at Tai Shek Mo to the east and Lok Ma Chau to the south. There are opportunities for enhancement of the landscape character of the Area through a well-designed landscape framework, proper layout design, new vistas or view corridors, landscape treatment and architectural design.

## 8.2 **Constraints**

### Environment and Ecology

- 8.2.1 The current land uses in the surrounding area (within the Hong Kong side) are fairly sensitive in terms of the environment and ecology, and are rural in character. There are some ecological resources including reedbeds, fishponds, wetlands, birds' flight path and river courses. Due consideration should be given to these environmentally and ecologically sensitive resources to avoid/minimize any possible adverse effects.
- 8.2.2 Environmental issues including ecology, noise, air quality (including odour from the Shenzhen River), landscape and visual quality, water quality, sewage, waste management and remediation of land contamination should be properly addressed during the development of the Lok Ma Chau Loop. An EIA study for development of Lok Ma Chau Loop was completed as part of the LMCL P&E Study to identify the necessary measures to address and mitigate the environmental issues. The EIA Report was approved with conditions on 25 October 2013 under the EIAO.

### Infrastructural and Engineering Constraints

- 8.2.3 The Area is currently not supported by any infrastructure. Transport networks between the Area and Lok Ma Chau Spur Line Control Point, the KTN NDA and other areas in Hong Kong and Shenzhen, if necessary, have to be provided. Sewerage facilities should be provided to serve the



future development. As the Area falls within the Deep Bay catchment, measures to offset the pollution load from the proposed development should be implemented in order to achieve the purpose of no net increase in pollution loads to the Deep Bay.

- 8.2.4 Another issue that needs to be addressed in the development of the Lok Ma Chau Loop is the potential increase in water level along the Shenzhen River due to the increase in flows from the land use changes. Besides, significant upgrading to the existing water supply and electricity systems to serve the Lok Ma Chau Loop development would be required.
- 8.2.5 According to the findings of the LMCL P&E Study, different lithologies are found within the Area. This may cause constraint for the foundation design and construction cost. Deep foundation would be required for building structures within the Area. Based on the existing ground investigation data, the Area is underlain mainly by metasedimentary (including locally marble) and volcanic rocks. For new development at the Area with potential cavernous marble, extensive geotechnical investigation, design and the supervision of geotechnical aspects of the works, may be required.

## **9. PLANNING THEME, URBAN DESIGN AND LANDSCAPE FRAMEWORK**

### ***Planning Theme***

- 9.1 Taking into account the recommendations of the LMCL P&E Study and the policy direction of 2017 MOU, the Lok Ma Chau Loop would be developed as the IT Park with a mix of R&D, higher education and C&C uses. Apart from the three major land uses, supporting commercial, as well as government, institution and community facilities would be provided to serve the development. The major land use framework for the Lok Ma Chau Loop (**Figure 2**) are as follows:
  - (a) Innovation/Education/Cultural and Creative Zone – The Zone comprises the core development parcels of the Area. In view of the rapid advancement of technology and complementary nature of the uses, a flexible mix of the development including research and development centres, teaching and research facilities, cultural and creative facilities, offices, lecture and exhibition facilities, etc. is allowed in this Zone. Supporting commercial facilities such as retail, general office accommodation, hotel, and residential institution, etc. would also be provided within the Lok Ma Chau Loop. Within this Zone, sufficient local open space would be provided for creating a pleasant environment fostering interaction between users and enhance visual openness of the Lok Ma Chau Loop.
  - (b) Interaction Zone – The Interaction Zone in the form of amenity/activity corridors runs through the middle of the Area in a northwest-southeast direction. It is intended to provide a people-oriented environment for

promoting social interaction and economic vibrancy for the IT Park. It would provide a platform for exchange of ideas and cultural/recreational activities through organization of various activities.

- (c) Ecological Zone – The Ecological Zone in the southeastern part of the Area will be a landmark of the Lok Ma Chau Loop. In addition to compensating the reedbed affected by the development and preservation of the biodiversity of the area, it also provides a buffer contributing to a transition between the development of the Lok Ma Chau Loop and the surrounding rural landscape to its south.
- (d) Riverside Promenade Zone – The two kilometre long Riverside Promenade Zone offers panoramic view and long vistas across the Shenzhen River, and provides passive recreation opportunity to its users and a pleasant waterfront landscape setting for the educational, high-tech R&D and C&C uses. It also echoes with the future riverside area across the Shenzhen River.

### ***Urban Design and Landscape Framework***

- 9.2 A comprehensive urban design and landscape framework (**Figure 3**) optimizing opportunities afforded by the Area, the adjacent Shenzhen development and the surrounding natural and landscape features on the Hong Kong side has been formulated to create a robust and harmonious economic and employment node. The following urban design and landscape principles are adopted in the Plan:

#### ***Urban to Rural Transition***

- 9.2.1 The Lok Ma Chau Loop is situated between the rural hinterland of Hong Kong dominated mainly by rural undeveloped land, fishponds and hilly areas to the south and highly urbanized context across the Shenzhen River to the north. As a transitional area between Shenzhen and Hong Kong, the low to medium-rise developments in the Lok Ma Chau Loop will blend in with the highly urbanized Shenzhen to the north and the rural backdrop of the northern part of Hong Kong to the south. The “Urban Fingers” from Shenzhen and the “Rural Fingers” from Hong Kong merge together to provide a place for collaboration between the two cities.

#### ***Building Height Profile with Gradation***

- 9.2.2 The building height profile of the Lok Ma Chau Loop development should take into consideration the need for variation in building height so as to respect the ecological and environmental considerations of the development. Developments within the Lok Ma Chau Loop would in general of low to medium-rise. To avoid monotonous visual appearance and minimize any potential impact on the birds’ flight paths, a graded building height profile (**Figure 4**) allowing for views and linkages across developments and into the surrounding hilly areas is proposed. The building height would be lowered towards the waterfront fronting the Shenzhen River with the building height of 34mPD to respond to the

natural settings along the Shenzhen River, then raised to attain a varied building height profile in the inner areas approaching to the Pedestrian Boulevard with building heights of 46mPD and 54mPD, and gradually lowered again southwards to the Ecological Area/Old Shenzhen River Meander with building heights ranging from 38mPD to 14mPD for a smooth transition to the rural backdrop of Hong Kong. A 50m-wide buffer zone adjoining the northern boundary of the Ecological Area is proposed as an environmentally friendly development zone for low-rise and low-density development. This zone would serve as a gradual transitional area between the built area to the north and the natural environment to the south.

#### Place Making for Interaction

- 9.2.3 A Pedestrian Boulevard which crosses northeast to southwest of the Area would be provided at the centre of the Lok Ma Chau Loop. The Pedestrian Boulevard, as the spine of the Lok Ma Chau Loop, would serve as a major activity corridor to create a diverse and vibrant public space and interconnect with other pedestrian linkages to key activity nodes and major public realm. Besides, two gateways would be provided on the opposite ends of the Pedestrian Boulevard across the Area, marking the Lok Ma Chau Loop's entries with medium-rise towers as significant landmarks with transport terminus. The detailed design and alignment of the Pedestrian Boulevard would be subject to further study. Nevertheless, the design should encourage people to congregate, enhance the landscape character and coverage of greenery of the site and facilitate knowledge and culture exchange. Apart from the Pedestrian Boulevard, activity corridors in the form of local open space stretching in a northwest to southeast direction would be provided to create a pleasant environment fostering interaction between users and enhance visual openness of the Lok Ma Chau Loop. Besides, sufficient local open space and leisure space should be allowed between building clusters for creating an intimate environment to facilitate interflows and exchanges among different users of the Lok Ma Chau Loop.

#### Providing Leisure Spaces

- 9.2.4 The two kilometre long riverside promenade running along the Shenzhen River and the Old Shenzhen River Meander would provide a district open space for the local community and the general public. The planned open space at the central part of the Lok Ma Chau Loop would serve also as a green buffer for the development clusters and provide natural greenery and recreational space. Through ecologically friendly integrated design, the existing reedbeds in Planning Area 8 would be preserved and provide an open landscape for public enjoyment. A walkable and multi-functional open space system comprising large-scale open space running in a north-south direction and local open space could provide a common public space shared by the community catering for diverse activities/functions and provide its users with different green/open spaces for enjoyment. Extensive landscape features and planting would be provided at

appropriate locations to create a comfortable and pedestrian friendly environment in the Lok Ma Chau Loop.

*Integration with the Nature to Create Harmonious Environment*

- 9.2.5 A green economy can be achieved through integrating the Lok Ma Chau Loop with the surrounding setting, protecting the natural ecology, maintaining biodiversity, adopting environmental protection measures, and promoting the use of green initiatives. Waterfront landscape areas are proposed along the north, south and west peripheries of the Lok Ma Chau Loop as natural buffer between the developed areas of the Lok Ma Chau Loop and its surrounding area.
- 9.2.6 The natural topography of the site and its natural features will be respected and incorporated into the design of Lok Ma Chau Loop. The retention of the Old Shenzhen River Meander with the provision of an Ecological Area aims to conserve natural amenities and transform them into attractive natural areas. To minimize disturbance to the natural habitat, the Ecological Area along the southeastern boundary of the Lok Ma Chau Loop would help maintain connectivity with the surrounding wetlands. About 3 ha of existing reedbeds within the central part of the Area in Planning Area 8 and within the Ecological Area in Planning Area 11 will be retained in-situ. These retained reedbeds will be hydrologically linked to the Ecological Area which will have positive contribution towards enhancing the overall ecological / landscape values of the Lok Ma Chau Loop area.

*Open View and Accessible Urban Structure*

- 9.2.7 With respect to the natural landscape and visual resources of the hilly areas, fishponds and rural village setting in the surrounding area of the Lok Ma Chau Loop, the low-rise building height profile descending towards the Shenzhen River and the Ecological Area/Old Shenzhen River Meander would allow better visual permeability and integration to the surrounding setting. Urban design and building structure in the Area can further complement the surrounding rural context by creating open view and intimate environment through the provision of visual corridors and wind/activity corridors in a form of road, sizeable land parcel, designated open space and the Riverside Promenade. The large open space in north-south direction at the central part of the Lok Ma Chau Loop serves as a major view corridor creating a visual linkage between the developed area in Shenzhen and the rural context in Hong Kong. The Pedestrian Boulevard is also planned to traverse various development lots and will serve to link up different uses and activities to create an activity corridor interconnected with other pedestrian linkages in the Lok Ma Chau Loop. The Pedestrian Boulevard within the development zones will provide visual penetration into the central development of Lok Ma Chau Loop.
- 9.2.8 To avoid potential impacts of birds' collisions with buildings, reflective façades should not be used for any buildings while appropriate glass and

façade treatments should be applied. The use of night-time lighting near the top of buildings or other structures as well as light spillage to the adjacent meander and wetland should be minimized.

#### Enhancing Air Ventilation

- 9.2.9 A detailed Air Ventilation Assessment (AVA) has been undertaken as part of the LMCL P&E Study to assess the existing wind environment and the likely impact of the proposed building design of the development on the pedestrian wind environment. According to the AVA, the major annual and summer prevailing wind directions are east-northeast and southwest respectively. To facilitate wind penetration, a major breezeway has been incorporated in the RODP under the LMCL P&E Study as a Pedestrian Boulevard crossing northeast/southwest of the Area. Other effective wind enhancement measures include permeable podium design with building height up to 15mPD is proposed within the commercial shop frontage, building height profile with gradation, specific site and podium coverage. Other local breezeways/air paths could also be incorporated in the form of local open space, road, green walkways, pedestrian streets, tree avenues and boulevards linkage. To further improve wind penetration at the pedestrian level, large and bulky podium development is discouraged in the Area. If future designs could not meet the proposed design controls on wind enhancement, further AVA study should be conducted by HKSTPC/its subsidiary company to ensure acceptability of the design for its air ventilation environment. It is also recommended that the future development should comply with the requirements in PNAP APP-152 on 'Sustainable Building Design Guidelines' and explore the opportunity to incorporate the mitigation measures set out in Chapter 11 of the Hong Kong Planning Standards and Guidelines on 'Urban Design Guidelines'.

## **10. LAND USE ZONINGS**

### **10.1 Commercial ("C"): Total Area 1.23 ha**

- 10.1.1 This zone is intended primarily for commercial developments, which may include uses such as office, shop, services, place of entertainment, eating place and hotel, functioning mainly as commercial/shopping centre(s) serving the needs of the Lok Ma Chau Loop.
- 10.1.2 Two sites in Planning Areas 3 and 4 are zoned "C" for providing a maximum total GFA of 48,000m<sup>2</sup> for commercial facilities. These sites are located at the northern end of the Pedestrian Boulevard and could serve as one of the gateways of the Lok Ma Chau Loop development. Apart from the commercial facilities, a public transport terminus and underground car parking facilities would be provided thereat to serve the future Lok Ma Chau Loop users.

- 10.1.3 Considering the proximity of the fishponds of Hoo Hok Wai and the birds' flight line, developments on these two "C" sites should not exceed a maximum building height of 42mPD. While it is the intention that the buildings at the two "C" sites should be architecturally iconic and sustainable in design, the façade treatment of the buildings should be soft and/or textured and extensive glazed façade design, reflective glazing, chromatic treatments as well as intrusive lighting design should be avoided in order to minimize the possible adverse impacts on the wildlife nearby.

10.2 Government, Institution or Community ("G/IC"): Total Area 3.95 ha

- 10.2.1 This zone is intended primarily for the provision of Government, institution and community facilities serving the needs of the Lok Ma Chau Loop and/or a wider district, region or the territory. It is also intended to provide land for uses directly related to or in support of the work of the Government, organizations providing social services to meet community needs, and other institutional establishments.
- 10.2.2 Two sites in Planning Areas 6 and 13 in the northeastern and southwestern parts of the Lok Ma Chau Loop near the Old Shenzhen River Meander are reserved for the development of two electricity sub-stations to meet the needs of the Lok Ma Chau Loop and a district cooling system (DCS) to provide energy-efficient chilled water for use in surface and process cooling. The building heights of the two electricity sub-stations and the DCS shall not exceed 25mPD and 14mPD respectively. Development of the DCS is subject to further study.
- 10.2.3 Two sites in Planning Areas 3 and 4 are reserved for the development of possible boundary crossing facilities, police facilities, a sub-divisional fire station cum ambulance depot, and a DCS. The building heights of the possible boundary crossing and police facilities, the DCS and the fire station cum ambulance depot shall not exceed 18mPD, 15mPD and 36mPD respectively. Developments of the possible boundary crossing facilities and the DCS are subject to further study.

10.3 Open Space ("O"): Total Area 18.18 ha

- 10.3.1 This zone is intended primarily for the provision of outdoor open-air public space for active and/or passive recreational uses serving the needs of the Lok Ma Chau Loop as well as the general public.
- 10.3.2 Two sites in Planning Areas 2 and 12 are planned for the provision of district open space in the form of riverside promenade, whereas a portion of the site in Planning Area 12 and another site in Planning Area 3 will connect with the Pedestrian Boulevard crosses northeast to southwest of the Area. The two kilometre long promenade along the riverbanks of the Shenzhen River and portions of the Old Shenzhen

River Meander would provide a social and leisure waterfront environment for the development. In developing the detailed design of the district open space, further considerations should be given to making the best use of the natural resources to create a pleasant and attractive environment.

- 10.3.3 The “O” site in Planning Area 7 at the central part of the Area is intended mainly for the provision of outdoor open-air public space for recreational use as well as provision of a piazza, and/or outdoor events space. The design of the site should enhance the integration with the areas with ecological components in the southeast, i.e. the retained reedbed and the Ecological Area. The exact type(s) of venue/facility to be provided would be further examined at the detailed design stage.
- 10.3.4 The site in Planning Area 8 adjoining the Ecological Area to the southeast is intended primarily for the preservation of about 3 ha of existing reedbed in-situ. The retained reedbed at the site should be integrated into the design of the open space in Planning Area 7 in the northwest and the Ecological Area immediately in the southeast for conserving the existing ecological and landscape resources as well as the provision of passive leisure and amenity space for the Lok Ma Chau Loop users. Use of native planting and non-intrusive boardwalk at appropriate locations will be provided to make this area an enjoyable amenity space that connects the reedbed and people frequenting the Area.

10.4 Other Specified Uses (“OU”): Total Area 53.49 ha

- 10.4.1 This zone is intended for specific development(s) and/or uses, which is/are specified in the annotation of the zone.

Research and Development, Education, and Cultural and Creative Industries

- 10.4.2 The “OU” annotated “Research and Development, Education, and Cultural and Creative Industries” zone is intended primarily for R&D, higher education, and C&C uses for promoting the development of the Lok Ma Chau Loop as a key base for scientific research, as well as higher education and C&C uses with a view to developing the Lok Ma Chau Loop as the IT Park. Complementary/supporting facilities such as retail, general office accommodation, and residential institution, etc. would also be provided within the zone.
- 10.4.3 Five sites in Planning Areas 5, 6, 9, 10 and 12 with a total land area of about 38.6 ha located at the central portion of the Area are designated for this zone. Taking into consideration the rapid advancement of technology and their complementary nature of these three major uses, a flexible mix of the development is allowed which is subject to a maximum total GFA of 1,143,000m<sup>2</sup>. Apart from this, a public transport terminus and underground car parking facilities would also be

provided at the site in Planning Area 12 and another site at the southwestern end of Planning Area 9.

- 10.4.4 A Pedestrian Boulevard running in a northeast to southwest direction in the central portion of the two “OU” sites in Planning Areas 5 and 9 would function as the spine of the Area where kiosks, benches, seating areas and landscaping areas would be provided within the Pedestrian Boulevard for public enjoyment. It would serve as a major activity corridor to create a diverse and vibrant public space in the zone. To encourage retail-oriented frontages along the Pedestrian Boulevard and allow the Pedestrian Boulevard to act as a breezeway across the Area, low-rise developments in the form of commercial shop frontage with a maximum building height not exceeding 15mPD are proposed along the development sites abutting the Pedestrian Boulevard. This commercial shop frontage design could promote pedestrian experience and enhance air ventilation at street level. The detailed design and alignment of the Pedestrian Boulevard would be subject to further study. Nevertheless, the design should encourage people to congregate, enhance the landscape character and coverage of greenery of the site and facilitate knowledge and culture exchange among the Lok Ma Chau Loop users.
- 10.4.5 A site in Planning Area 12 located at the junction of Roads L1 and D1 at the southwestern end of the Area is intended to be developed as a landmark taking the advantage of its gateway location at the entrance of the Western Connection Road. With a view to creating a punctuation and landmark effect at this gateway location, a relatively higher building height of not exceeding 54mPD is proposed for this site.
- 10.4.6 To further safeguard the Ecological Area and birds’ flight path, there is a low density and a low-rise building buffer zone of 50m in width next to the Ecological Area, with appropriate screen planting, as set out in the Environmental Permit and the EIA Report. Within the 50m-wide buffer zone in the southern fringe of Planning Areas 6 and 10, all buildings should be placed in the 25m-wide area farther away from the Ecological Area in which developments should not exceed a maximum building height of 14mPD as set out in the EIA report. No developments are allowed within the 25m-wide area abutting the boundary of the Ecological Area (**Figure 4**).
- 10.4.7 According to the approved EIA, development within the zone should generally be low to medium-rise with a stepped height ranging from 14mPD to 54mPD. As set out in paragraph 10.4.6 above, in areas close to the Ecological Area, developments should not exceed a maximum building height of 14mPD. There is then an intermediate height zone of 26mPD and 38mPD before rising up to a building height of not exceeding 46mPD in the core area, and a building height of not exceeding 54mPD at a western corner site which serves as another gateway development.



- 10.4.8 Activity corridors in the form of local open space stretching in a northwest to southeast direction would be planned and provided within individual development sites of the “OU” zone to create a pleasant environment fostering interaction between users and enhance visual openness of the Lok Ma Chau Loop development. The detailed design of the local open space, including the locations and form, would be subject to further study by the HKSTPC or its subsidiary company at the implementation stage.
- 10.4.9 The layout of the development shall be comprehensively planned and designed. A master plan shall be submitted by the project proponent to the Government to ensure an integrated and compatible layout for development of land in this “OU” zone before any development proceeds. The Area would be subject to various technical considerations such as traffic, sewerage, drainage, environment, ecology, urban design and air ventilation, etc. The project proponent would be required to ascertain the impacts on various technical aspects that could be induced by the proposed development in this zone and other nearby developments with the implementation of appropriate mitigation measures. Other technical requirements including assessments on air ventilation, as required by the Government, shall be fulfilled by the project proponent at the detailed design stage.

#### Ecological Area

- 10.4.10 An elongated site in Planning Area 11 of about 12.8 ha along the Old Shenzhen River Meander in the southeast of the Lok Ma Chau Loop is zoned “OU” annotated “Ecological Area”. The planning intention is to provide/reserve land for the creation of areas of reedbed for compensating the habitat loss due to the development in the Lok Ma Chau Loop and providing movement corridor for birds and other wildlife connecting with the ecologically important areas to the east and west of the Lok Ma Chau Loop. During the wet seasons, it would also serve as a flood retention pond.

#### Sewage Treatment Works

- 10.4.11 A site in Planning Area 4 of about 2.1 ha is designated as “OU” annotated “Sewage Treatment Works” for the provision of a sewage treatment works (STW) to serve the Lok Ma Chau Loop development. The development of this site shall not exceed a maximum building height of 15mPD, subject to the detailed design of the STW.

### 10.5 Conservation Area (“CA”): Total Area 16.34 ha

- 10.5.1 This zone is intended to protect and retain the existing natural landscape and ecological features of the Old Shenzhen River Meander and the associated riparian vegetation, which forms an important element of the flight line corridor for birds and is used by the Eurasian

Otter, for conservation, educational and research purposes, and to separate sensitive natural environment from the adverse effects of development. There is a general presumption against development in this zone. In general, only developments that are needed to support the conservation of the ecological integrity of the wetland ecosystem or the existing natural landscape or scenic quality of the Old Shenzhen River Meander, or are essential infrastructure projects with overriding public interest may be permitted.

- 10.5.2 The Old Shenzhen River Meander to the southeast of the Lok Ma Chau Loop is designated as “CA”. The area is used by Eurasian Otter (*Lutra lutra*) which is a rare mammal species in Hong Kong and of global conservation concern, and is the existing flight path for birds connecting the ecologically important areas to the east and west of the Lok Ma Chau Loop.
- 10.5.3 Diversion of stream, filling of land/pond or excavation of land may cause adverse drainage impacts on the adjacent areas and adverse impacts on the natural environment. In view of the conservation value of the area within this zone, permission from the Board is required for such activities.

## 11. COMMUNICATION

To support the development of the Lok Ma Chau Loop, a number of improvements to the existing road network/new road are necessary. The traffic impacts of the planned developments have been assessed. With the implementation of the proposed improvement works, no adverse traffic impact is envisaged.

### 11.1 Road Network

- 11.1.1 The Lok Ma Chau Loop will be connected with different parts of Hong Kong and the surrounding area by two main roads, namely the Western Connection Road (WCR) and the Eastern Connection Road (ECR). The WCR, via widening/upgrading the existing Lok Ma Chau Road and Ha Wan Tsuen East Road will connect the western part of the Lok Ma Chau Loop to San Tin Highway. With the proposed improvement schemes for Ha Wan Tsuen East Road and Lok Ma Chau Road in place, it is expected that the WCR will be able to handle the additional traffic generated by the Phase 1 development of Lok Ma Chau Loop.
- 11.1.2 Nevertheless, it is anticipated that the planned capacity of the WCR alone will not be able to accommodate the traffic generated by the Lok Ma Chau Loop upon its full implementation. In this regard, the ECR is proposed to link with the proposed road network of the KTN NDA. The environmental acceptability of the proposed ECR has yet to be established and a separate EIA study under the EIAO would need to be carried out upon review of the traffic condition after operation of the first phase of the Lok Ma Chau Loop development.

- 11.1.3 To ensure the external connectivity is adequate to cope with the traffic demand generated by the development, a dedicated direct link between the Lok Ma Chau Loop and the MTR Lok Ma Chau Station is proposed in the form of a viaduct passing above San Sham Road alongside to the existing Lok Ma Chau Spurline viaduct, subject to detailed design. Subject to future change in the existing policy/security restriction, a pedestrian walkway to allow possible pedestrian access between the Lok Ma Chau Loop and MTR Lok Ma Chau Station should also be explored so as to reduce road traffic and the associated environmental impacts.
- 11.1.4 Local distributor roads, namely Road D1, Road L1 and Road L2 are designed for single two-lane configuration. Road D1 is to serve as the key internal vehicular transport route connecting with WCR and ECR. Road L1 and Road L2 will branch off from Road D1 for access to the proposed new developments.

## 11.2 Public Transport Connections

- 11.2.1 Two transport termini cum underground car parks are reserved in Planning Areas 3, 9 and 12 with park-and-ride facilities. The concerned sites are located at both sides of the Lok Ma Chau Loop and close to the external connection roads. The provision of park-and-ride facilities thereat would help reduce internal vehicular traffic within the Lok Ma Chau Loop. To achieve a green community, road-based environmentally friendly transport modes may be introduced to serve the internal circular public transport route, subject to further study.
- 11.2.2 For rail transport, the Lok Ma Chau Loop users will have the choice of using the MTR Lok Ma Chau Station to access the rest of Hong Kong's railway network using the existing MTR East Rail Line. Subject to detailed design, a direct link between the southwestern part of the Lok Ma Chau Loop and the MTR Lok Ma Chau Station would be provided. Besides, the proposed MTR Kwu Tung Station at KTN NDA will be another major transport node to the Lok Ma Chau Loop, the development of which is subject to further technical assessments/studies.
- 11.2.3 At the implementation stage of the Lok Ma Chau Loop development, traffic and transport impact would have to be updated. Future operator of the Lok Ma Chau Loop development shall work out with the Transport Department regarding the appropriate provisions and operation arrangements for public transport services.

## 11.3 Pedestrian and Cycle Circulation

To promote walking and cycling within the Lok Ma Chau Loop, major pedestrian and cycle tracks are planned along the waterfront of the Shenzhen River and the

Old Shenzhen River Meander in Planning Areas 2 and 12 as well as the open space in Planning Area 7 at the central part of the Lok Ma Chau Loop. The Pedestrian Boulevard, which crosses northeast to southwest of the Area, would function as a prime activity corridor for pedestrians. At the detailed design stage, an extensive network of pedestrian walkways and cycle tracks should be worked out to link up major activities nodes, including the transport termini, riverside promenade, open space, development sites, etc. Convenient cycle parking facilities would be provided near the major destinations and activity nodes. In addition, pedestrian walkways and cycle tracks will be provided along the proposed WCR and ECR (subject to further study) leading to the Area.

## **12. UTILITY SERVICES**

### **12.1 Water Supply**

New water supply system will be provided for both fresh and flushing water. Fresh water supply will be provided from the proposed Kwu Tung North Fresh Water Service Reservoir (KTNFWSR) to cope with the fresh water demand arising from the Lok Ma Chau Loop development. A flushing water service reservoir will be required if treated sewage effluent is used for feeding the non-potable water demand. A site outside the Area has been identified for the flushing water service reservoir, which will be subject to further investigation.

### **12.2 Drainage**

A drainage network will be provided within the Area to collect the storm water runoff. The collected storm water will be either discharged directly to the trained course of Shenzhen River or diverted to the Ecological Area before discharging to the trained course of Shenzhen River. Drainage reserves are proposed at suitable locations to facilitate the provision of drainage network.

### **12.3 Sewerage and Sewage Treatment**

A sewage treatment works and associated sewerage network will be provided within the Area for the collection and treatment of sewage before discharge. Off-site measures will be undertaken to offset the residual pollution load from the STW effluent.

### **12.4 Electricity**

Electricity is to be supplied by the electricity company. Within the Area, two electricity sub-stations will be provided. New electricity cables can be laid along the proposed WCR and Sai Kwo Road / Tun Yu Road and be connected to the electricity sub-stations within the Area. For power distribution, electricity cables will be installed from the electricity sub-stations to the developments.

#### 12.5 Gas

Town gas is to be provided by the gas company through new gas mains along the WCR. Within the Area, the gas mains will run along the internal roads. Gas governor kiosks will also be installed at suitable locations.

#### 12.6 Telecommunications

Telecommunications are to be provided by telecommunications companies. New cables will be laid along the proposed WCR. Within the Area, the cables will run along the internal roads. For wireless/mobile communication, telecommunications radio base stations will be installed at suitable locations.

### 13. CULTURAL HERITAGE

There are no declared monuments, graded buildings or recorded site of archeological interest within the Area.

### 14. IMPLEMENTATION

- 14.1 Although existing uses non-conforming to the statutory zonings are tolerated, any material change of use and any other development/redevelopment must be always permitted in terms of the Plan, or if permission is required, in accordance with the permission granted by the Board. The Board has published a set of guidelines for the interpretation of existing use in the urban and new town areas. Any person who intends to claim an “existing use right” should refer to the guidelines and will need to provide sufficient evidence to support his claim. The enforcement of the zonings mainly rests with the Buildings Department, the Lands Department and the various licensing authorities.
- 14.2 The Plan provides a broad land use framework. For the implementation of the Lok Ma Chau Loop as the IT Park, the HKSTPC/its subsidiary company will develop and manage the IT Park. The HKSTPC/its subsidiary company will conduct further studies to prepare a master plan for the Lok Ma Chau Loop development with development phasing/programme, detailed land uses and detailed design including the environmental and ecological measures proposed in the approved EIA report and architectural design proposals, and confirm its technical feasibility. Necessary development and technical requirements for the development at the Area could be controlled through the lease (such as requirements for submission of master plan, detailed technical assessments and building set back, etc. as appropriate) and the Buildings Ordinance via building plan submission. A more detailed departmental Outline Development Plan (ODP) would be prepared in consultation with Government departments concerned. The ODP is a non-statutory plan which will be used as the basis for public works planning and site planning purpose. It includes information on detailed land uses, development parameters and boundaries of individual sites, green coverage, waterworks and drainage reserves, site formation levels and building height control, road alignment and dimensions, location of pedestrian

facilities, public utility facilities as well as other building and engineering requirements.

- 14.3 CEDD is responsible for the detailed design and implementation of the site formation, land decontamination and environmental mitigation works and provision of infrastructures within the Lok Ma Chau Loop and in the surrounding area. An implementation programme with phasing and packaging of works has been formulated under the LMCL P&E Study and the current phasing and packaging of works are shown in **Figure 5**, which is subject to further review by CEDD. The development of the “OU(Ecological Area)” site will fall under the advance works package. Afterwards, part of the research and development and education facilities, supporting facilities including office, retail, hotel and a transport terminus as well as part of open space are scheduled as the first batch of facilities in Phase 1 of the Lok Ma Chau Loop development. The timing of construction of infrastructures including distributor roads, drainage and installation of utilities will be programmed at the detailed design stage to meet the demand for development in the Lok Ma Chau Loop.
- 14.4 Disposal of sites is undertaken by the Lands Department. Public works projects are coordinated by the CEDD in conjunction with the client departments and the works departments, such as the Highways Department and the Architectural Services Department. In the course of implementing the Plan, the North District Council and Yuen Long District Council would also be consulted as and when appropriate.
- 14.5 Planning applications to the Board will be assessed on individual merits. In general, the Board’s consideration of the planning applications will take into account all relevant planning considerations which may include the departmental ODP and the guidelines published by the Board. The ODP will be available for public inspection at the Planning Department once available. Guidelines published by the Board are available from the Board’s website, the Secretariat of the Board and the Technical Services Division of the Planning Department. Application forms and Guidance Notes for planning applications can be downloaded from the Board’s website and are available from the Secretariat of the Board and the Technical Services Division of the Planning Department. Applications should be supported by such materials as the Board thinks appropriate to enable it to consider the applications.

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**TOWN PLANNING BOARD**

**2017**

**PLANNING REPORT ON  
LOK MA CHAU LOOP**

**MAY 2017**

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Figure 6 – Building Height Profile (*Plan 9 of the TPB Paper Main Text*)

Figure 7 – Overall Urban Design and Landscape Framework (*Plan 8 of the TPB Paper Main Text*)

Figure 8 – Phasing Plan for Lok Ma Chau Loop Development (*Plan 11 of the TPB Paper Main Text*)

## **1. INTRODUCTION**

### **1.1 Purpose of the Planning Report**

The purpose of this Planning Report is to give an account of the background of the Lok Ma Chau Loop development and an appraisal of the existing conditions, characteristics and development requirements/constraints of the Lok Ma Chau Loop area (the Area). It also aims at providing a basis for the preparation of an Outline Zoning Plan (OZP) for the Area and the formulation of a planning framework to guide future development.

## **2. BACKGROUND**

### **2.1 Lok Ma Chau Loop – Planning and Engineering Study**

2.1.1 In the 2007-2008 Policy Address, the development at Lok Ma Chau Loop was one of the ten major infrastructure projects for economic growth in Hong Kong. In March 2008, the ‘Hong Kong-Shenzhen Joint Task Force on Boundary District Development’ under the ‘Hong Kong/Shenzhen Co-operation Meeting’ agreed that both sides would conduct a joint comprehensive study on the development of the Lok Ma Chau Loop under the principle of ‘co-study, co-development and mutual

benefit’. From June to July 2008, the governments of both sides conducted public engagement on the possible future land use of the Lok Ma Chau Loop. The outcomes indicated that higher education, high-tech research and development (R&D) as well as cultural and creative industries (C&C) received more support by the public of both places.

2.1.2 In June 2009, ‘the Planning and Engineering Study on Development of Lok Ma Chau Loop’ (the LMCL P&E Study) was jointly commissioned by the Civil Engineering and Development Department (CEDD) and the Planning Department. In the Stage 1 Public Engagement of the LMCL P&E Study held between November 2010 and January 2011, the public generally accepted the proposed land uses, and agreed that the superior location of the Lok Ma Chau Loop should be capitalized to enhance the co-operation between Hong Kong and Shenzhen, and a balance between conservation and development should be struck under the principle of sustainable development. In the Stage 2 Public Engagement of the LMCL P&E Study held from May to July 2012, public opinion was collected in respect of the draft Recommended Outline Development Plan (‘RODP’) for the Lok Ma Chau Loop. The public generally had no objection to the land uses proposed in the draft RODP.

2.1.3 Following the two stages of Public Engagement, planning study and detailed technical assessments were carried out and the RODP for the Lok Ma Chau Loop was finalized. The RODP (**Figure 1**) and the recommendations of the LMCL P&E Study were publicized in Hong Kong and Shenzhen through an Information Digest in July 2013. The LMCL P&E Study was completed in full in end 2014 (**Annex I**). In October 2013, the Environment Impact Assessment (EIA) Report for the Lok Ma Chau Loop development was approved with conditions pursuant to the Environmental Impact Assessment Ordinance (EIAO). The Environmental Permit (EP) was also granted in November 2013.

## **2.2 Policy Direction : Hong Kong-Shenzhen Innovation and Technology Park**

2.2.1 On 3 January 2017, a “Memorandum of Understanding on Jointly Developing the LMC Loop by Hong Kong and Shenzhen” (2017 MOU) was signed between the Hong Kong and Shenzhen Governments, agreeing to jointly develop the Lok Ma Chau Loop as the Hong Kong-Shenzhen Innovation and Technology Park (IT Park), setting up a key base for scientific research, as well as relevant higher education, cultural and creative and other complementary facilities. Under the 2017

MOU, the HKSAR Government will be responsible for constructing the necessary infrastructures within the Lok Ma Chau Loop and its surrounding area, and will lease the formed land in the Lok Ma Chau Loop to the Hong Kong Science and Technology Parks Corporation (HKSTPC) for the development of the IT Park. HKSTPC will set up a wholly-owned subsidiary company (the project proponent) which will be vested with the responsibility to build the superstructure of the IT Park, as well as to operate, maintain and manage the same.

2.2.2 A key base for co-operation in top-notch scientific research will be established in the IT Park. Through liaising with top-tier enterprises, R&D institutions and higher education institutions in the Mainland and overseas, a base for co-operation in scientific research will be established for exchanging and co-operating with international research talents. Based on the existing research strengths and development needs of Hong Kong, potential areas for development that could be considered include robotics, biomedicine, smart city and Fintech. However, due to the rapid advancement of technology, these development areas will have to be reviewed with regard to the situation and needs of the latest economic developments at that time.

2.2.3 The 2017 MOU also states that an ‘Integrated

Advanced Training Platform' will be set up in the IT Park through soliciting proposals from the world's top higher education institutions (including higher education institutions in Hong Kong, the Mainland and overseas) for operating branches or new institutions in the IT Park. These branches or new institutions will focus on the provision of postgraduate programmes and professional training courses on new or advanced technology, aiming to nurture talents and engender synergy and clustering effects with the facilities in the IT Park. Relevant cultural and creative supporting facilities will also be provided to complement with the scientific projects and activities in the IT Park.

- 2.2.4 The IT Park will provide a maximum total gross floor area (GFA) of 1.2 million m<sup>2</sup> for flexible allocation for R&D, higher education and C&C uses, where appropriate. Land will also be reserved for commercial, and government, institution and community facilities to support the development at the Lok Ma Chau Loop. HKSTPC will conduct a consultancy study to examine, among others, the positioning of operations, as well as the superstructure of the IT Park.

#### *Flexibility in the Development Mix*

- 2.2.5 Based on the LMCL P&E Study, developments for

R&D, C&C, and higher education with supporting commercial uses are proposed to be located in the central portion of the Area, which are subject to a maximum total GFA of 1,143,000m<sup>2</sup>. The boundary of the development site, the maximum GFA, the planned infrastructure and supporting facilities form the basis for the preparation of the OZP. To facilitate the Lok Ma Chau Loop to be developed as the IT Park, a flexible mix of R&D, C&C, and higher education uses is proposed. The environmental and ecological considerations including the recommendations of the approved EIA and the requirements of the EP would be duly incorporated in the OZP and its Explanatory Statement.

- 2.2.6 Under the LMCL P&E Study, a number of technical assessments have been undertaken to confirm the technical feasibility of the Lok Ma Chau Loop development. With the proposed mix, CEDD have undertaken review of the planned infrastructure and various technical assessments based on the study result in LMCL P&E Study. Key findings of the review are at **Annex II**.

### **3. THE STUDY AREA**

#### **3.1. Location**

3.1.1 The Study Area (the Area) (**Figure 2**) covers an area of about 104 hectares (ha) and is comprised of the land area of Lok Ma Chau Loop of about 87.7 ha and the meander section of the Old Shenzhen River of about 16.3 ha. The Lok Ma Chau Loop was originally within the administrative boundary of Shenzhen. In accordance with Order No. 221 of the State Council of the People's Republic of China promulgated on 1 July 1997, after the training of the Shenzhen River, the boundary will follow the new centre line of the river. The Lok Ma Chau Loop, originally within the administrative boundary of Shenzhen, has since been included within the administrative boundary of the Hong Kong Special Administrative Region (HKSAR).

3.1.2 The Area is located in a transition zone between the highly urbanized commercial/residential development in Shenzhen and the rural hinterland of Hong Kong. It is bounded by the bank of Shenzhen River in the northwest, fishponds of Hoo Hok Wai in the northeast, Lok Ma Chau and Tai Law Hau in the south, the Lok Ma Chau Control Point and Lok Ma Chau Spur Line Control Point in the southwest, as well as the Mai Po Nature Reserve

in the further southwest. To the further north, across the Shenzhen River, is the Futian commercial area and Huanggang Port of Shenzhen. The Kwu Tung North New Development Area (KTN NDA) is located approximately 920m to the southeast of the Lok Ma Chau Loop.

#### **3.2. Physical Setting and Topography**

3.2.1 The Area is located along the Hong Kong and Shenzhen boundary, to the west of Lo Wu and to the northeast of San Tin and Mai Po in the Northwest New Territories. It comprises an extensive piece of flatland with grasses and shrubs surrounded by the re-aligned Shenzhen River and the Old Shenzhen River Meander.

3.2.2 The surrounding area of the Area is mainly rural in nature, comprising natural landscape, hilly terrain, woodland, village settlements, agricultural land, fishponds and wetland. The Mai Po Nature Reserve (Mai Po and Inner Deep Bay Ramsar Site) is about 5.4 km to the southwest of the Area. Across the Shenzhen River to the north is the Futian commercial area of Shenzhen.

### **3.3. Existing Land Uses and Natural Features (Figures 3a, 3b, and 3c)**

3.3.1 The Lok Ma Chau Loop is largely comprised of grassland, reed marsh and scattered groups of trees. Adjacent areas include fishpond and marsh areas of high ecological value at Hoo Hok Wai/Ta Sha Lok and Lok Ma Chau, as well as the Old Shenzhen River Meander, the original course of the Shenzhen River prior to training, which now surrounds the Lok Ma Chau Loop on three sides.

3.3.2 The area is backed to the south by hilly grassland and shrubland, as well as disturbed village and village edge habitats, small fragmented areas of shrubland and woodland; a number of narrow seasonal and permanent streams flow through the area. Two small areas of wet agricultural fields are present, one at Lok Ma Chau Tsuen and the other at Chau Tau Tsuen. To the west of the Lok Ma Chau Loop lies the major infrastructural linkage combining the access road to Lok Ma Chau BCP and the MTR Lok Ma Chau Spur Line Railway, and beyond which is a large wetland mitigation area for the latter.

#### *Reed Marsh inside Lok Ma Chau Loop*

3.3.3 An area of about 10.96 ha of reed marsh lies within

the Lok Ma Chau Loop; this comprises 8.7% of reed marsh in the Deep Bay area. Records of Purple Heron, small bitterns, Eastern Marsh Harrier, reed warblers and Chinese Penduline Tit indicate this reedbed is comparable in ecological value to reedbeds elsewhere in the Deep Bay area, including the long-established reedbed at Mai Po Nature Reserve.

#### *Old Shenzhen River Meander*

3.3.4 The Old Shenzhen River Meander is the original course of the Shenzhen River and was restored as a mitigation measure for potential impacts to waterbirds due to the loss of 19 ha of fishponds as part of Shenzhen River Regulation Project Stage 1 Works. The meander's main ecological value appears to arise from its being an important element of the ecological corridor that runs through the area, both in terms of the birds' flight lines and mammals' movement corridors. The profile and high water level in the channel appear to limit its ability to function as a foraging area, though the natural vegetation on either side is used as a roosting area by waterbirds. In addition, records of Eurasian Otter from it or near the Meander suggest that it may be of importance to this species.

### **3.4. Historical Development**

The Area was formed in 1997 as a disposal site of mud extracted from the training works for the Shenzhen River and has been left vacant since its formation.

### **3.5. Population and Employment**

There is currently no population in the Area and no development has been established yet. It is estimated that the planned working/student population in the Lok Ma Chau Loop will be in the range of 50,000 to 53,000.

### **3.6. Land Ownership**

The Lok Ma Chau Loop was originally within the administration area of Shenzhen Municipality and was used as a dumping ground for mud extracted from Shenzhen River Training Works. It has been delineated as part of the HKSAR's administrative area following the completion of the Shenzhen River regulation project in 1997.

### **3.7. Existing Transportation and Access**

3.7.1 The main road network in the vicinity of the Area is located at the western and southern side of the Area. The roads anticipated to serve as the main external road access for the Lok Ma Chau development include San Tin Highway/San Tin Interchange,

Fanling Highway, Castle Peak Road (San Tin Section/Chau Tau Section/Kwu Tung Section), Lok Ma Chau Road, Ha Wan Tsuen Road, Lung Hau Road, Border Road and San Sham Road.

3.7.2 In terms of public transportation, the Lok Ma Chau Spur Line is the second rail based linkage to the boundary control point for access to the Mainland. The 7.4 km long alignment branches off from the existing East Rail Line north of MTR Sheung Shui Station and then extends to the MTR Station where customs and immigration facilities are located. A major public transport interchange is located at Castle Peak Road (San Tin Section), north of San Tin Interchange. Regular franchised bus, taxi and green mini-bus services are also available.

### **3.8. Existing Infrastructure and Utility Services**

#### *Drainage*

3.8.1 The Area falls within the catchment boundary of San Tin Basin. Currently, the storm water runoff from the Area is discharged and conveyed to the Shenzhen River through the Old Shenzhen River Meander. The Shenzhen River has 1 in 200 years flood protection whereas the Old Shenzhen River Meander has 1 in 2 years to 1 in 100 years flood protection under the planned development scenarios.

*Sewerage*

- 3.8.2 The Area is outside the sewerage catchment of the Shek Wu Hui Sewage Treatment Works (STW) and the Yuen Long STW. There is no public sewerage within and in the vicinity of the Area except the sewage treatment plant for the existing MTR Lok Ma Chau Station.

*Water Supply*

- 3.8.3 The Area is located at the interface boundary of Sheung Shui Water Treatment Works (WTW) and Ngau Tam Mei WTW.

*Public Utilities*

- 3.8.4 As the Area has not been developed, there is no existing power cable, primary power substation, cable and gas main within the Area. There are, however, provisions of some public utilities in the vicinity of the Area.



## **4. PLANNING ANALYSIS**

### **4.1 Strategic Planning Context**

4.1.1 The “Hong Kong 2030: Planning Vision and Strategy” completed in 2007 has recommended, inter alia, that the Lok Ma Chau Loop, with strategic locational advantage of being near the Futian commercial area across the Shenzhen River, can provide development space to strengthen co-operation between Hong Kong and Shenzhen. Shenzhen authorities share the same vision and consider the future development of the Lok Ma Chau Loop should gear towards the development of high-tech industry, establishing a science and research centre, as well as enhancing Shenzhen and Hong Kong’s economic development and collaboration. The regional planning of the Pearl River Delta area also encourages establishing co-operation among institutions of higher education in the area.

4.1.2 The updating exercise of the territorial development strategy, “Hong Kong 2030+: Towards a Planning Vision and Strategy Transcending 2030” (“Hong Kong 2030+”), reaffirmed the strategic location and the potential of high-technology development of the Lok Ma Chau Loop. Under the proposed

Conceptual Spatial Framework of “Hong Kong 2030+”, the Lok Ma Chau Loop is located along the Eastern Knowledge and Technology Corridor which agglomerates the existing high-technology and knowledge-based industries and tertiary institutions, as well as the additional innovation and technology developments proposed in the eastern part of Hong Kong. Synergy and mutual growth of these industries could then be achieved through the development of a tech-ecosystem.

4.1.3 In the sub-regional planning context, the Lok Ma Chau Loop is located near the KTN NDA and areas with development potential in New Territories North in Hong Kong as well as the commercial areas in Shenzhen. The development of the Lok Ma Chau Loop can bring an important synergy and give impetus to these adjacent areas and the territory, while these areas can provide supporting facilities and services, talents, customers and markets.

### **4.2 Development Opportunities (Figure 4)**

#### *Locational Advantages*

4.2.1 The Lok Ma Chau Loop is located at the Hong Kong/Shenzhen boundary district which is in close proximity to the Lok Ma Chau Control Point and Lok Ma Chau Spur Line Control Point in Hong

Kong as well as the Huanggang Port and Futian commercial area in Shenzhen. The geographical location of the Lok Ma Chau Loop enjoys strategic advantages which can facilitate complementary co-operation with Shenzhen. The development of the IT Park in the Lok Ma Chau Loop can facilitate I&T enterprises to leverage on Shenzhen's strong production facilities for mass production and tap into the huge Mainland market, enhancing economic benefits by expanding the production scale.

- 4.2.2 The Lok Ma Chau Loop is also located near the KTN NDA and areas with development potentials in New Territories North in Hong Kong, as well as the commercial areas in Shenzhen. The development of the Lok Ma Chau Loop can bring an important synergy and give impetus to these adjacent areas, while these areas can provide supporting facilities and services, talents, customers and markets. The development can also foster a tech-ecosystem for high-technology and knowledge-based industries in the northeastern part of Hong Kong.

*Sustainable, Smart and Green Community*

- 4.2.3 The land area of the Lok Ma Chau Loop (about 87.7 ha) is about four times that of the Hong Kong

Science Park in Pak Shek Kok. It will be Hong Kong's largest I&T platform for convergence of top-notch international I&T talents. Besides, it is a new development site and has the flexibility and opportunities for adoption of various smart and green initiatives such as a well-planned information and communications technology infrastructure network, smart, green and resilient infrastructure including innovative and highly efficient energy and water installations, reuse of treated sewage effluent, district cooling system, green transport and green buildings etc. in the planning and design to create a smart and green community.

*Traffic and Transport*

- 4.2.4 Being in close proximity to the San Tin Highway, Fanling Highway, San Tin Interchange, and the Lok Ma Chau Station of the Mass Transit Railway (MTR) East Rail Line, there are opportunities for the provision of an integrated transport system in the Area as a whole to enhance the connectivity and mobility, including the provision of direct road linkage between the Lok Ma Chau Loop and the KTN NDA (subject to further study) and promotion of sustainable transportation.

*Socio-economic*

- 4.2.5 The Lok Ma Chau Loop development can meet the different socio-economic needs by creating an intimate environment conducive to interaction among research, education and creative activities, providing a sustainable and high quality business and research environment, providing employment and business opportunities, as well as providing an integrated infrastructure system and improving the overall character of the Area. The cultural heritage resources in the surrounding area also have the potential for heritage tourism and heritage promotion.

*Nature and Landscape*

- 4.2.6 The physical setting of the Lok Ma Chau Loop is unique comprising an extensive piece of flatland surrounded by the realigned Shenzhen River and the Old Shenzhen River Meander. Fishponds and wetland are found in the surrounding area like Hoo Hok Wai and San Tin with the backdrop of the vegetated ridges at Tai Shek Mo to the east and Lok Ma Chau to the south. There are opportunities for enhancement of the landscape character of the Area through a well-designed landscape framework, proper layout design, new vistas or view corridors, landscape treatment and architectural design.

**4.3 Development Constraints (Figure 4)**

*Environment and Ecology*

- 4.3.1 The current land uses in the surrounding areas (within the Hong Kong side) are fairly sensitive in terms of the environment and ecology, and are rural in character. There are some ecological resources including reedbeds, fishponds, wetlands, birds' flight path and river courses. Due consideration should be given to these environmentally and ecologically sensitive resources to avoid/minimize any possible adverse effects.
- 4.3.2 Environmental issues including ecology, noise, air quality (including odour from the Shenzhen River), landscape and visual quality, water quality, sewage, waste management and remediation of land contamination should be properly addressed during the development of the Lok Ma Chau Loop. An EIA study for development of Lok Ma Chau Loop was completed as part of the LMCL P&E Study to identify the necessary measures to address and mitigate the environmental issues. The EIA Report was approved with conditions on 25 October 2013 under the EIAO.

*Infrastructural and Engineering Constraints*

- 4.3.3 The Area is currently not supported by any infrastructure. Transport networks between the Area and Lok Ma Chau Spur Line Control Point, the KTN NDA and other areas in Hong Kong and Shenzhen, if necessary, have to be provided. Sewerage facilities should be provided to serve the future development. As the Area falls within the Deep Bay catchment, measures to offset the pollution load from the proposed development should be implemented in order to achieve the purpose of no net increase in pollution loads to the Deep Bay.
- 4.3.4 Another issue that needs to be addressed in the development of the Lok Ma Chau Loop is the potential increase in water level along the Shenzhen River due to the increase in flows from the land use changes. Besides, significant upgrading to the existing water and electricity supply systems to serve the Lok Ma Chau Loop development would be required.
- 4.3.5 According to the findings of the LMCL P&E Study, different lithologies are found within the Area. This may cause constraint for the foundation design and construction cost. Deep foundation would be required for building structures within the Area.

Based on the existing ground investigation data, the Area is underlain mainly by metasedimentary (including locally marble) and volcanic rocks. For new development at the Area with potential cavernous marble, extensive geotechnical investigation, design and the supervision of geotechnical aspects of the works, may be required.

## **5. PLANNING PROPOSALS**

### **5.1 The Outline Zoning Plan**

The Lok Ma Chau Loop OZP (the Plan) prepared under section 3(1)(a) of the Town Planning Ordinance is to provide a statutory basis for planning control over the Area. Uses and development that are always permitted and those for which the Town Planning Board's permission must be sought in various zones are set out in a schedule of Notes attached to the Plan. Also accompanying the Plan is an Explanatory Statement to assist an understanding of the Plan and to reflect the planning intentions and objectives of the Board for various land-use zonings.

### **5.2 Planning Theme, Urban Design and Landscape Framework**

#### Planning Themes

5.2.1 Taking into account the recommendations of the LMCL P&E Study and the policy direction of 2017 MOU, the Lok Ma Chau Loop would be developed as the Park with a mix of R&D, higher education and C&C uses. Apart from the three major land uses, supporting commercial, as well as government, institution and community facilities would be provided to serve the development. The major land

use framework for the Lok Ma Chau Loop (**Figure 5**) are as follows:

- (a) Innovation/Education/Cultural and Creative Zone – The Zone comprises the core development parcels of the Area. In view of the rapid advancement of technology and complementary nature of the uses, a flexible mix of the development including research and development centres, teaching and research facilities, cultural and creative facilities, offices, lecture and exhibition facilities, etc. is allowed in this Zone. Supporting commercial facilities such as retail, general office accommodation, hotel, and residential institution, etc. would also be provided within the Lok Ma Chau Loop. Within this Zone, sufficient local open space would be provided for creating a pleasant environment fostering interaction between users and enhance visual openness of the Lok Ma Chau Loop.
- (b) Interaction Zone – The Interaction Zone in the form of amenity/activity corridors runs through the middle of the Area in a northwest-southeast direction. It is intended to provide a people-oriented environment for promoting social interaction and economic vibrancy for the IT Park. It would provide a platform for exchange

of ideas and cultural/recreational activities through organization of various activities.

- (c) Ecological Zone – The Ecological Zone in the southeastern part of the Area will be a landmark of the Lok Ma Chau Loop. In addition to compensating the reedbed affected by the development and preservation of the biodiversity of the area, it also provides a buffer contributing to a transition between the development of the Lok Ma Chau Loop and the surrounding rural landscape to its south.
- (d) Riverside Promenade Zone – The two kilometre long Riverside Promenade Zone offers panoramic view and long vistas across the Shenzhen River, and provides passive recreation opportunity to its users and a pleasant waterfront landscape setting for the educational, high-tech R&D and C&C uses. It also echoes with the future riverside area across the Shenzhen River.

#### Urban Design and Landscape Framework

- 5.2.2 A comprehensive urban design and landscape framework (**Figure 7**) optimizing opportunities afforded by the Area, the adjacent Shenzhen development and the surrounding natural and landscape features on the Hong Kong side has been

formulated to create a robust and harmonious economic and employment node. The following urban design and landscape principles are adopted in the Plan:

#### *Urban to Rural Transition*

- 5.2.3 The Lok Ma Chau Loop is situated between the rural hinterland of Hong Kong dominated mainly by rural undeveloped land, fishponds and hilly areas to the south and highly urbanized context across the Shenzhen River to the north. As a transitional area between Shenzhen and Hong Kong, the low to medium-rise developments in the Lok Ma Chau Loop will blend in with the highly urbanized Shenzhen to the north and the rural backdrop of the northern part of Hong Kong to the south. The “Urban Fingers” from Shenzhen and the “Rural Fingers” from Hong Kong merge together to provide a place for collaboration between the two cities.

#### *Building Height Profile with Gradation*

- 5.2.4 The building height profile of the Lok Ma Chau Loop development should take into consideration the need for variation in building height so as to respect the ecological and environmental considerations of the development. Developments

within the Lok Ma Chau Loop would in general of low to medium-rise. To avoid monotonous visual appearance and minimize any potential impact on the birds' flight paths, a gradated building height profile (**Figure 6**) allowing for views and linkages across developments and into the surrounding hilly areas is proposed. The building height would be lowered towards the waterfront fronting the Shenzhen River with the building height of 34mPD to respond to the natural settings along the Shenzhen River, then raised to attain a varied building height profile in the inner areas approaching to the Pedestrian Boulevard with building heights of 46mPD and 54mPD, and gradually lowered again southwards to the Ecological Area/Old Shenzhen River Meander with building heights ranging from 38mPD to 14mPD for a smooth transition to the rural backdrop of Hong Kong. A 50m-wide buffer zone adjoining the northern boundary of the Ecological Area is proposed as an environmentally friendly development zone for low-rise and low-density development. This zone would serve as a gradual transitional area between the built area to the north and the natural environment to the south.

### *Place Making for Interaction*

#### 5.2.5 A Pedestrian Boulevard which crosses northeast to

southwest of the Area would be provided at the centre of the Lok Ma Chau Loop. The Pedestrian Boulevard, as the spine of the Lok Ma Chau Loop, would serve as a major activity corridor to create a diverse and vibrant public space and interconnect with other pedestrian linkages to key activity nodes and major public realm. Besides, two gateways would be provided on the opposite ends of the Pedestrian Boulevard across the Area, marking the Lok Ma Chau Loop's entries with medium-rise towers as significant landmarks with transport terminus. The detailed design and alignment of the Pedestrian Boulevard would be subject to further study. Nevertheless, the design should encourage people to congregate, enhance the landscape character and coverage of greenery of the site and facilitate knowledge and culture exchange. Apart from the Pedestrian Boulevard, activity corridors in the form of local open space stretching in a northwest to southeast direction would be provided to create a pleasant environment fostering interaction between users and enhance visual openness of the Lok Ma Chau Loop. Besides, sufficient local open space and leisure space should be allowed between building clusters for creating an intimate environment to facilitate interflows and exchanges among different users of the Lok Ma Chau Loop.

*Providing Leisure Spaces*

5.2.6 The two kilometre long riverside promenade running along the Shenzhen River and the Old Shenzhen River Meander would provide a district open space for the local community and the general public. The planned open space at the central part of the Lok Ma Chau Loop would serve also as a green buffer for the development clusters and provide natural greenery and recreational space. Through ecologically friendly integrated design, the existing reedbeds in the central part of the Lok Ma Chau Loop would be preserved and provide an open landscape for public enjoyment. A walkable and multi-functional open space system comprising large-scale open space running in a north-south direction and local open space could provide a common public space shared by the community catering for diverse activities/functions and provide its users with different green/open spaces for enjoyment. Extensive landscape features and planting would be provided at appropriate locations to create a comfortable and pedestrian friendly environment in the Lok Ma Chau Loop.

*Integration with the Nature to Create Harmonious Environment*

5.2.7 A green economy can be achieved through integrating the Lok Ma Chau Loop with the surrounding setting, protecting the natural ecology, maintaining biodiversity, adopting environmental protection measures, and promoting the use of green initiatives. Waterfront landscape areas are proposed along the north, south and west peripheries of the Lok Ma Chau Loop as natural buffer between the developed areas of the Lok Ma Chau Loop and its surrounding area.

5.2.8 The natural topography of the site and its natural features will be respected and incorporated into the design of Lok Ma Chau Loop. The retention of the Old Shenzhen River Meander with the provision of an Ecological Area aims to conserve natural amenities and transform them into attractive natural areas. To minimize disturbance to the natural habitat, the Ecological Area along the southeastern boundary of the Lok Ma Chau Loop would help maintain connectivity with the surrounding wetlands. About 3 ha of existing reedbeds within the central part of the Area and within the Ecological Area will be retained in-situ. These retained reedbeds will be hydrologically linked to the Ecological Area which will have positive



contribution towards enhancing the overall ecological / landscape values of the Lok Ma Chau Loop area.

*Open View and Accessible Urban Structure*

- 5.2.9 With respect to the natural landscape and visual resources of the hilly areas, fishponds and rural village setting in the surrounding area of the Lok Ma Chau Loop, the low-rise building height profile descending towards the Shenzhen River and the Ecological Area/Old Shenzhen River Meander would allow better visual permeability and integration to the surrounding setting. Urban design and building structure in the Area can further complement the surrounding rural context by creating open view and intimate environment through the provision of visual corridors and wind/activity corridors in a form of road, sizeable land parcel, designated open space and the Riverside Promenade. The large open space in north-south direction at the central part of the Lok Ma Chau Loop serves as a major view corridor creating a visual linkage between the developed area in Shenzhen and the rural context in Hong Kong. The Pedestrian Boulevard is also planned to traverse various development lots and will serve to link up different uses and activities to create an activity corridor interconnected with other

pedestrian linkages in the Lok Ma Chau Loop. The Pedestrian Boulevard within the development zones will provide visual penetration into the central development of Lok Ma Chau Loop.

- 5.2.10 To avoid potential impacts of birds' collisions with buildings, reflective façades should not be used for any buildings while appropriate glass and façade treatments should be applied. The use of night-time lighting near the top of buildings or other structures as well as light spillage to the adjacent meander and wetland should be minimized.

*Enhancing Air Ventilation*

- 5.2.11 A detailed Air Ventilation Assessment (AVA) has been undertaken as part of the LMCL P&E Study to assess the existing wind environment and the likely impact of the proposed building design of the development on the pedestrian wind environment. According to the AVA, the major annual and summer prevailing wind directions are east-northeast and southwest respectively. To facilitate wind penetration, a major breezeway has been incorporated in the RODP under the LMCL P&E Study as a Pedestrian Boulevard crossing northeast/southwest of the Area. Other effective wind enhancement measures include permeable podium design with building height up to 15mPD is

proposed within the commercial shop frontage, building height profile with gradation, specific site and podium coverage. Other local breezeways/air paths could also be incorporated in the form of local open space, road, green walkways, pedestrian streets, tree avenues and boulevards linkage. To further improve wind penetration at the pedestrian level, large and bulky podium development is discouraged in the Area. If future designs could not meet the proposed design controls on wind enhancement, further AVA study should be conducted by HKSTPC/its subsidiary company to ensure acceptability of the design for its air ventilation environment. It is also recommended that the future development should comply with the requirements in PNAP APP-152 on 'Sustainable Building Design Guidelines' and explore the opportunity to incorporate the mitigation measures set out in Chapter 11 of the Hong Kong Planning Standards and Guidelines on 'Urban Design Guidelines'.

### **5.3 Land Use Proposals**

5.3.1 Different land use zonings are formulated in the OZP to provide a flexible and appropriate statutory land use planning framework to facilitate the Lok Ma Chau Loop development in particular the development of the IT Park.

#### **5.3.2 Commercial ("C")**

- (a) This zone is intended primarily for commercial developments, which may include uses such as office, shop, services, place of entertainment, eating place and hotel, functioning mainly as commercial/shopping centre(s) serving the needs of the Lok Ma Chau Loop.
- (b) Two sites at the northern part of the Area are zoned "C" for providing a maximum total GFA of 48,000m<sup>2</sup> for commercial facilities. These sites are located at the northern end of the Pedestrian Boulevard and could serve as one of the gateways of the Lok Ma Chau Loop development. Apart from the commercial facilities, a public transport terminus and underground car parking facilities would be provided thereat to serve the future Lok Ma Chau Loop users.
- (c) Considering the proximity of the fishponds of Hoo Hok Wai and the birds' flight line, developments on these two "C" sites should not exceed a maximum building height of 42mPD. While it is the intention that the buildings at the two "C" sites should be architecturally iconic and sustainable in design, the façade treatment

of the buildings should be soft and/or textured and extensive glazed façade design, reflective glazing, chromatic treatments as well as intrusive lighting design should be avoided in order to minimize the possible adverse impacts on the wildlife nearby.

### 5.3.3 *Government, Institution or Community (“G/IC”)*

- (a) This zone is intended primarily for the provision of Government, institution and community facilities serving the needs of the Lok Ma Chau Loop and/or a wider district, region or the territory. It is also intended to provide land for uses directly related to or in support of the work of the Government, organizations providing social services to meet community needs, and other institutional establishments.
- (b) Two sites located in the northeastern and southwestern parts of the Lok Ma Chau Loop respectively near the Old Shenzhen River Meander are reserved for the development of two electricity sub-stations to meet the needs of the Lok Ma Chau Loop and a district cooling system (DCS) to provide energy-efficient chilled water for use in surface and process cooling. The building heights of the two electricity substations and the DCS shall not

exceed 25mPD and 14mPD respectively. Development of the DCS is subject to further study.

- (c) Two sites located at the northern part of the Area are reserved for the development of possible boundary crossing facilities and police facilities, a sub-divisional fire station cum ambulance depot, and a DCS. The building heights of the possible boundary crossing and police facilities, the DCS and the fire station cum ambulance depot shall not exceed 18mPD, 15mPD and 36mPD respectively. Developments of the possible boundary crossing facilities and the DCS are subject to further study.

### 5.3.4 *Open Space (“O”)*

- (a) This zone is intended primarily for the provision of outdoor open-air public space for active and/or passive recreational uses serving the needs of the Lok Ma Chau Loop as well as the general public.
- (b) Two sites are planned for the provision of district open space in the form of riverside promenade, whereas a portion of the site near the southwestern side of the Old Shenzhen River

Meander and another site near the northern side of the Meander will connect with the Pedestrian Boulevard crosses northeast to southwest of the Area. The two kilometre long promenade along the riverbanks of the Shenzhen River and portions of the Old Shenzhen River Meander would provide a social and leisure waterfront environment for the development. In developing the detailed design of the district open space, further considerations should be given to making the best use of the natural resources to create a pleasant and attractive environment.

- (c) The northern portion of the “O” site at the central part of the Area is intended mainly for the provision of outdoor open-air public space for recreational use as well as provision of a piazza, and/or outdoor events space. The design of the site should enhance the integration with the areas with ecological components in the southeast, i.e. the retained reedbed and the Ecological Area. The exact type(s) of venue/facility to be provided would be further examined at the detailed design stage.
- (d) The southern portion of the “O” site at the central part of the Area adjoining the Ecological Area to the southeast is intended primarily for

the preservation of about 3 ha of existing reedbed in-situ. The retained reedbed at the site should be integrated into the design of the open space of the northwestern portion and the Ecological Area immediately in the southeast for conserving the existing ecological and landscape resources as well as the provision of passive leisure and amenity space for the Lok Ma Chau Loop users. Use of native planting and non-intrusive boardwalk at appropriate locations will be provided to make this area an enjoyable amenity space that connects the reedbed and people frequenting the Area.

#### 5.3.5 *Other Specified Uses (“OU”)*

- (a) This zone is intended for specific development(s) and/or uses, which is/are specified in the annotation of the zone.

##### Research and Development, Education, and Cultural and Creative Industries

- (b) The “OU” annotated “Research and Development, Education, and Cultural and Creative Industries” zone is intended primarily for research and development, higher education, and cultural and creative industries uses for promoting the development of the Lok Ma Chau Loop as a key base for scientific research, as

well as higher education and C&C uses with a view to developing the Lok Ma Chau Loop as the IT Park. Complementary/supporting facilities such as retail, general office accommodation and residential institution, etc. would also be provided within the zone.

- (c) Five sites with a total land area of about 38.6 ha located at the central portion of the Area are designated as the zone. Taking into consideration, the rapid advancement of technology and their complementary nature of these three major uses, a flexible mix of the development is allowed which is subject to a maximum total GFA of 1,143,000m<sup>2</sup>. Apart from this, a public transport terminus and underground car parking facilities would also be provided in the southwestern part of the zone.
- (d) A Pedestrian Boulevard running in a northeast to southwest direction in the central portion of the two “OU” sites would function as the spine of the Area where kiosks, benches, seating areas and landscaping areas would be provided within the Pedestrian Boulevard for public enjoyment. It would serve as a major activity corridor to create a diverse and vibrant public space in the zone. To encourage retail-oriented frontages along the Pedestrian Boulevard and allow the

Pedestrian Boulevard to act as a breezeway across the Area, low-rise developments in the form of commercial shop frontage with a maximum building height not exceeding 15mPD are proposed along the development sites abutting the Pedestrian Boulevard. This commercial shop frontage design could promote pedestrian experience and enhance air ventilation at street level. The detailed design and alignment of the Pedestrian Boulevard would be subject to further study. Nevertheless, the design should encourage people to congregate, enhance the landscape character and coverage of greenery of the site and facilitate knowledge and culture exchange among the Lok Ma Chau Loop users.

- (e) The site at the junction of Roads L1 and D1 at the southwestern end of the Area is intended to be developed as a landmark taking the advantage of its gateway location at the entrance of the Western Connection Road. With a view to creating a punctuation and landmark effect at this gateway location, a relatively higher building height of not exceeding 54mPD is proposed for this site.
- (f) To further safeguard the Ecological Area and birds’ flight path, there is a low density and a

low-rise building buffer zone of 50m in width next to the Ecological Area, with appropriate screen planting, as set out in the EP and the EIA Report. Within the 50m-wide buffer zone, all buildings should be placed in the 25m-wide area farther away from the Ecological Area in which developments should not exceed a maximum building height of 14mPD as set out in the EIA report. No developments are allowed within 25m-wide area abutting the boundary of the Ecological Area (**Figure 6**).

- (g) According to the approved EIA, development within the zone should generally be low to medium-rise with a stepped height ranging from 14mPD to 54mPD. In areas close to the Ecological Area, developments should not exceed a maximum building height of 14mPD. There is then an intermediate height zone of 26mPD and 38mPD before rising up to a building height of not exceeding 46mPD in the core area, and a building height of not exceeding 54mPD at a western corner site which serves as another gateway development.
- (h) Activity corridors in the form of local open space stretching in northwest to southeast direction would be planned and provided within individual development sites of the “OU” zone

to create a pleasant environment fostering interaction between users and enhance visual openness of the Lok Ma Chau Loop development. The detailed design of the local open space, including the locations and form, would be subject to further study by the HKSTPC or its subsidiary company at the implementation stage.

- (i) The layout of the development shall be comprehensively planned and designed. A master plan shall be submitted by the project proponent to the Government to ensure an integrated and compatible layout for development of land in this “OU” zone before any development proceeds. The Area would be subject to various technical considerations such as traffic, sewerage, drainage, environment, ecology, urban design and air ventilation, etc. The project proponent would be required to ascertain the impacts on various technical aspects that could be induced by the proposed development in this zone and other nearby developments with the implementation of appropriate mitigation measures. Other technical requirements including assessments on air ventilation, as required by the Government, shall be fulfilled by the project proponent at the detailed design stage.

Ecological Area

- (j) An elongated site of about 12.8 ha along the Old Shenzhen River Meander in the southeast of the Lok Ma Chau Loop is zoned “OU” annotated “Ecological Area”. The planning intention is to provide/reserve land for the creation of areas of reedbed for compensating the habitat loss due to the development in the Lok Ma Chau Loop and providing movement corridor for birds and other wildlife connecting with the ecologically important areas to the east and west of the Lok Ma Chau Loop. During the wet seasons, it would also serve as a flood retention pond. .

Sewage Treatment Works

- (k) A site of about 2.1 ha is designated as “OU” annotated “Sewage Treatment Works” for the provision of a sewage treatment works (STW) to serve the Lok Ma Chau Loop development. The development of this site shall not exceed a maximum building height of 15mPD, subject to the detailed design of the STW.

5.3.6 *Conservation Area (“CA”)*

- (a) This zone is intended to protect and retain the existing natural landscape and ecological features of the Old Shenzhen River Meander

and the associated riparian vegetation, which forms an important element of the flight line corridor for birds and is used by the Eurasian Otter, for conservation, educational and research purposes, and to separate sensitive natural environment from the adverse effects of development. There is a general presumption against development in this zone. In general, only developments that are needed to support the conservation of the ecological integrity of the wetland ecosystem or the existing natural landscape or scenic quality of the Old Shenzhen River Meander, or are essential infrastructure projects with overriding public interest may be permitted.

- (b) The Old Shenzhen River Meander to the southeast of the Lok Ma Chau Loop is designated as “CA”. The area is used by Eurasian Otter (*Lutra lutra*) which is a rare mammal species in Hong Kong and of global conservation concern, and is the existing flight path for birds connecting the ecologically important areas to the east and west of the Lok Ma Chau Loop.
- (c) Diversion of stream, filling of land/pond or excavation of land may cause adverse drainage impacts on the adjacent areas and adverse

impacts on the natural environment. In view of the conservation value of the area within this zone, permission from the Board is required for such activities.



## **6. IMPLEMENTATION**

The draft OZP provides a broad land use framework for development control and implementation of planning proposals for the Area. The type of permitted developments and uses on land within the Area are listed in the Notes of the Plan. Implementation of the proposed land uses and development control would be made according to the planning intentions and stated restrictions of the respective zones of this draft OZP. Provision for planning application would allow flexibility in land use planning and control of development to meet changing needs. The project proponent will conduct further studies to formulate a master plan for the Lok Ma Chau Loop development with development phasing and detailed design including the environmental and ecological measures proposed in the approved EIA report and architectural design proposals, and confirm its technical feasibility. Also, a more detailed departmental Outline Development Plan would be prepared in consultation with government departments concerned.

### **6.1 Infrastructure and Utility Provision**

#### *Transport*

- 6.1.1 To support the development of the Lok Ma Chau Loop, a number of improvements to the existing road network are necessary. The traffic impacts of the planned developments have been assessed.

With the implementation of the proposed improvement works, no adverse traffic impact is envisaged.

#### Road Network

- 6.1.2 The Lok Ma Chau Loop will be connected with different parts of Hong Kong and the surrounding area by two main roads, namely the Western Connection Road (WCR) and the Eastern Connection Road (ECR). The WCR, via widening/upgrading the existing Lok Ma Chau Road and Ha Wan Tsuen East Road will connect the western part of the Lok Ma Chau Loop to San Tin Highway. With the proposed improvement schemes for Ha Wan Tsuen East Road and Lok Ma Chau Road in place, it is expected that the WCR will be able to handle the additional traffic generated by the Phase 1 development of Lok Ma Chau Loop.
- 6.1.3 Nevertheless, it is anticipated that the planned capacity of the WCR alone will not be able to accommodate the traffic generated by the Lok Ma Chau Loop upon its full implementation. In this regard, the ECR is proposed to link with the proposed road network of the KTN NDA. The environmental acceptability of the proposed ECR has yet to be established and a separate EIA study under the EIAO would need to be carried out upon

review of the traffic condition after operation of the first phase of the Lok Ma Chau Loop development.

- 6.1.4 To ensure the external connectivity is adequate to cope with the traffic demand generated by the development, a dedicated direct link between the Lok Ma Chau Loop and the MTR Lok Ma Chau Station is proposed in the form of a viaduct passing above San Sham Road alongside to the existing Lok Ma Chau Spurline viaduct, subject to detailed design. Subject to future change in the existing policy/security restriction, a pedestrian walkway to allow possible pedestrian access between the Lok Ma Chau Loop and MTR Lok Ma Chau Station should also be explored so as to reduce road traffic and the associated environmental impacts.

- 6.1.5 Local distributor roads, namely Road D1, Road L1 and Road L2 are designed for single two-lane configuration. Road D1 is to serve as the key internal vehicular transport route connecting with WCR and ECR. Road L1 and Road L2 will branch off from Road D1 for access to the proposed new developments.

#### Public Transport Connections

- 6.1.6 Two transport termini cum underground car parks

are proposed at the southwestern and northeastern ends of the Area with park-and-ride facilities. The concerned sites are located at both sides of the Lok Ma Chau Loop and close to the external connection roads. The provision of park-and-ride facilities thereat would help reduce internal vehicular traffic within the Lok Ma Chau Loop. To achieve a green community, road-based environmentally friendly transport modes may be introduced to serve the internal circular public transport route, subject to further study.

- 6.1.7 For rail transport, the Lok Ma Chau Loop users will have the choice of using the MTR Lok Ma Chau Station to access the rest of Hong Kong's railway network using the existing MTR East Rail Line. Subject to detailed design, a direct link between the southwestern part of the Lok Ma Chau Loop and the MTR Lok Ma Chau Station would be provided. Besides, the proposed Kwu Tung Station at KTN NDA will be another major transport node to the Lok Ma Chau Loop, the development of which is subject to further technical assessments/studies.

- 6.1.8 At the implementation stage of the Lok Ma Chau Loop development, traffic and transport impact would have to be updated. Future operator of the Lok Ma Chau Loop development shall work out

with the Transport Department regarding the appropriate provisions and operation arrangements for public transport services.

#### Pedestrian and Cycle Circulation

- 6.1.9 To promote walking and cycling within the Lok Ma Chau Loop, major pedestrian and cycle tracks are planned along the waterfront of the Shenzhen River and the Old Shenzhen River Meander as well as the open space at the central part of the Lok Ma Chau Loop. The Pedestrian Boulevard, which crosses northeast to southwest of the Area, would function as a prime activity corridor for pedestrians. At the detailed design stage, an extensive network of pedestrian walkways and cycle tracks should be worked out to link up major activities nodes, including the transport termini, riverside promenade, open space, development sites, etc. Convenient cycle parking facilities would be provided near the major destinations and activity nodes. In addition, pedestrian walkways and cycle tracks will be provided along the proposed WCR and ECR (subject to further study) leading to the Area.

#### *Water Supply*

- 6.1.10 New water supply system will be provided for both fresh and flushing water. Fresh water supply

will be provided from the proposed Kwu Tung North Fresh Water Service Reservoir (KTNFWSR) to cope with the fresh water demand arising from the Lok Ma Chau development. A flushing water service reservoir will be required if treated sewage effluent is used for feeding the non-potable water demand. A site outside the Area has been identified for the flushing water service reservoir, which will be subject to further investigation.

#### *Drainage*

- 6.1.11 A drainage network will be provided within the Area to collect the storm water runoff. The collected storm water will be either discharged directly to the trained course of Shenzhen River or diverted to the Ecological Area before discharging to the trained course of Shenzhen River. Drainage reserves are proposed at suitable locations to facilitate the provision of drainage network.

#### *Sewerage and Sewage Treatment*

- 6.1.12 An on-site STW (tentatively known as the LMC Loop STW) and associated sewerage network will be provided within the Area for collection and treatment of all the sewage arising from the development before discharge. Off-site measures will be undertaken to offset the residual pollution

load from the STW effluent.

#### *Electricity*

- 6.1.13 Electricity is to be supplied by the electricity company. Within the Area, two electricity sub-stations will be provided. New electricity cables can be laid along the proposed WCR and Sai Kwo Road / Tun Yu Road and be connected to the electricity sub-stations within the Area. For power distribution, electricity cables will be installed from the electricity sub-stations to the developments.

#### *Gas*

- 6.1.14 Town gas is to be provided by the gas company through new gas mains along the WCR. Within the Area, the gas mains will run along the internal roads. Gas governor kiosks will also be installed at suitable locations.

#### *Telecommunications*

- 6.1.15 Telecommunications are to be provided by telecommunications companies. New cables will be laid along the proposed WCR. Within the Area, the cables will run along the internal roads. For wireless/ mobile communication,

telecommunications radio base stations will be installed at suitable locations.

## **6.2 Development Programme**

An implementation programme with phasing and packaging of works has been formulated under the LMCL P&E Study and the current phasing and packaging of works are shown in **Figure 8**, which is subject to further review by CEDD. The development of the “OU(Ecological Area)” site falls under the advance works package. Afterwards, part of the research and development and education facilities, supporting facilities including office, retail, hotel and a transport terminus as well as part of open space are scheduled as the first batch of facilities in Phase 1 of the Lok Ma Chau Loop development. The infrastructure under the project including land decontamination and environmental mitigation works, site formation and provision of infrastructure within and outside the Lok Ma Chau Loop will be implemented under the advance works and two main works packages respectively. The timing of construction of infrastructure including distributor roads, drainage, and installation of utilities will be programmed at the detailed design stage to meet the demand for development in the Lok Ma Chau Loop.

**PLANNING DEPARTMENT  
MAY 2017**

## **Annex I Key Findings and Recommendations of the LMCL P&E Study**

### **Planning Vision**

- The planning vision for the Lok Ma Chau Loop is established having regard to the public aspirations and the development potential/concerns of the Study Area. The vision for the Lok Ma Chau Loop is to develop it into a “Hong Kong/Shenzhen Special Co-operation Zone” and a hub for cross-boundary human resources development within a Knowledge and Technology Exchange Zone (KTEZ) under the principle of sustainable development that can benefit the long-term development of Hong Kong, the Greater Pearl River Delta and South China region.

### **Land Use Framework**

- With reference to the public comments on the future land use of the Lok Ma Chau Loop received by Hong Kong and Shenzhen governments in 2008, consideration can be given to developing the Lok Ma Chau Loop for higher education as the leading land use, complemented by high-tech research and development (R&D) and cultural and creative industries (C&C) uses.

### **Functional Zones**

- The Lok Ma Chau Loop, which is to be developed with

higher education as the leading land use and complemented by high-tech R&D and C&C uses, can be divided into five functional zones.

- (a) Education Zone – the Education Zone located in the middle part of the Lok Ma Chau Loop will provide teaching and research facilities, library, offices and other ancillary facilities for higher education;
- (b) Innovation Zone – the Innovation Zone located along the waterfront in the northeastern and southwestern parts of the Lok Ma Chau Loop will be a hub for high-tech R&D and C&C uses providing offices, research, lecture and exhibition facilities, etc.;
- (c) Interaction Zone – the Interaction Zone located in the central core will be an open air public space to facilitate interaction among users of the KTEZ. It will provide a platform for exchange of ideas and cultural activities through organization of various activities;
- (d) Ecological Zone – the Ecological Zone in the south/southeast will be a landmark of the Lok Ma Chau Loop. In addition to compensating the reedbed affected by the development for preservation of the biodiversity of the area, it also provides a buffer contributing to a transition between the surrounding rural landscape and the Lok Ma Chau Loop so as to further mitigate potential impact generated by the low-

rise buildings on the ecologically sensitive areas; and

- (e) Riverside Promenade Zone – the two kilometre-long Riverside Promenade Zone will provide a pleasant waterfront environment for the education, high-tech R&D and C&C uses. It also echoes with the future riverside area across the Shenzhen River.

### **Recommended Outline Development Plan (RODP)**

- Development at the Lok Ma Chau Loop should allow flexibility in the planning and implementation of the higher education use, which will be complemented by the high-tech R&D and C&C uses.
- The RODP land use framework provides a flexible planning framework for higher education as the leading land use and allows interchangeability of the uses of the high-tech R&D and C&C to encourage people to congregate and foster interaction among “Production, Education and Research”.
- Key components of the RODP, with major elements of the Urban Design Framework, are as follows:
  - ✧ The concept of “urban to rural transition” by making reference to the development relationship between the highly urbanized area in Shenzhen and the green area in Hong Kong separated by the Shenzhen River.

### ✧ Building Height and Built Form

- Amalgamation of individual development plots of similar land uses is allowed to offer maximum development flexibility for increased resilience to future change and growth.
- A building height profile to take into consideration the need for variation in building heights and to respect the ecological and environmental considerations of the Lok Ma Chau Loop development is proposed.
- Higher density developments within the core and developments of lower density at the fringe areas to allow penetration of wind through the peripheral area towards the inner area of the Loop which is also important to enhance air ventilation.
- The need for variation in building height band respecting the ecological and environmental considerations of the development. To avoid monotonous visual appearance and minimize any potential impact on the birds’ flight paths, a low-rise building height profile (from two storeys to maximum 12 storeys) with building heights descending from the core areas towards Shenzhen River and the Ecological Area / Old Shenzhen River meander is proposed.

- ✧ Creation of Vibrant Places for Public Enjoyment
  - Synergy is encouraged by allowing the co-location of a patchwork of activities and land uses that are easily connected and accessible. Mixed land uses and activities together with variable building forms and densities at key nodes of activities and major pedestrian-oriented corridors are encouraged. The proposed Pedestrian Boulevard serves to link up different uses and activities along the corridor to create a vibrant environment.
  - Major public realm and spaces are intended to be interconnected by pedestrian linkages and Amenity/Activity Corridors with maximized pedestrian access to key facilities.
- ✧ Breezeways – Three breezeways and one local air path are identified within the Lok Ma Chau Loop to facilitate wind penetration across the area. These wind corridors run in a northeast and southwest direction generally align with the direction of the annual and summer prevailing winds. Wind corridors could be in form of roads, non-building areas (NBAs) and Amenity/Activity Corridors.
- ✧ Protection and Conservation of Natural Resources
  - An Ecological Area of about 100m in width stretching across the southeastern boundary of the Lok Ma Chau Loop for reedbed compensation and as part of the effort to enhance the ecological integrity of the site, and a 50m-wide buffer area which includes a 25m-wide transition zone are proposed.
  - In-situ preservation of part of the existing reedbed in the central part of the Lok Ma Chau Loop is also proposed.
- ✧ The Pedestrian Boulevard would be the prime activity corridor with a design intent to encourage people to congregate, whereby buildings with retail-oriented frontages aligning the corridor supply an array of pedestrian activities across the northeast-southwest Lok Ma Chau Loop; two gateways would be located on the opposite ends of the Pedestrian Boulevard across the Lok Ma Chau Loop; and three focal points are proposed at intersections where different circulation networks across the Pedestrian Boulevard, including cycle tracks, pedestrian pathways and Amenity/Activity Corridors, serving as intersections whereby an influx of synergy could be cultivated between pedestrians, as street-oriented activity grounds for student life and community.
- ✧ Traffic and Transport
  - The southwestern part of Lok Ma Chau Loop will be connected to the external road network using the Western Connection Road (WCR), i.e. upgrading

of Lok Ma Chau Road and Ha Wan Tsuen East Road. The Eastern Connection Road (ECR) will be required for connection to the Kwu Tung North New Development Area (KTN NDA) and Ma Tso Lung area upon full development. (**Remarks:** The ECR has been excluded from the EIA report and is not covered in the EP issued to the Civil Engineering and Development Department (CEDD). The environmental acceptability of the ECR will need to be further studied and determined in future under a separate EIA study.) A dedicated Direct Link between Lok Ma Chau Loop and MTR Lok Ma Chau Station in the form of an elevated viaduct to the existing Lok Ma Chau Spurline viaduct together with road-based Environmentally-Friendly Transport System along the main road may be introduced to serve the internal circular public transport route.

- Two transport interchanges (TIs) with underground park-and-ride facilities are proposed at both gateway ends of the Loop. About 530 car parking spaces with a GFA of about 13,100m<sup>2</sup> and about 530 car parking spaces with a GFA of about 21,200m<sup>2</sup> are proposed at the southwestern and northeastern TIs. Nevertheless, whether these transport facilities are GFA accountable have yet to be determined at the implementation stage.

- ✧ Open Space – Three main types of open space and Riverside Promenade are proposed within the Lok Ma Chau Loop to provide multi-functional open space for public enjoyment, i.e. Pedestrian Boulevard, Ribbon Park and Green Connectors, Courtyard Space, and Riverside Promenade.
- ✧ District Level Low Carbon Strategy – A number of measures to achieve low carbon strategy at district level are recommended, which include the provision of wind corridors, Amenity/Activity Corridors, street circulation and low carbon modes of transport and landscape measures for environmental mitigation, district cooling system, high energy-efficient buildings, application of renewable energy, water saving and recycling, sustainable waste management and selection of materials with lower carbon intensities and higher recycled content.
- ✧ Urban Design Control and Guidelines – To promote an “urban to rural” transitional development relationship between Hong Kong and Shenzhen, an urban design framework for the Lok Ma Chau Loop development is formulated. Based on the urban design framework, urban design controls and guidelines in relation to building height and site coverage restrictions, NBAs, building setback, building mass, building façade treatment, designation of areas for ‘Shop and Services’ and ‘Eating Place’ uses, provision of widened



entryway, public pedestrian paths and greenery, and landscape treatment are recommended.

### Key Development Assumptions

- Based on a gross site area of 87.7 ha and a maximum GFA of 1,200,000m<sup>2</sup>, the overall plot ratio is about 1.37.
- With a total land area of about 87.7 ha (comprising about 38.5 ha of developable area, 12.8 ha for ecological area, 26.5 ha for open space and amenity / activity corridor uses, and 9.9 ha for roads), the land use schedule of the RODP for Lok Ma Chau Loop is as follows:

Land Use	Gross Site Area (ha)	Maximum GFA (m <sup>2</sup> )
Education	22.8	720,000
High-tech R&D/ C&C	8.6	411,000
Amenity/Activity Corridor	15.9	-
Supporting Commercial	1.2	60,000 (with 12,000 within sites for education, high-tech R&D /C&C uses)
Government Uses/Other Specified Uses	5.9	9,000 (including possible boundary crossing facilities, ancillary office of district cooling system (DCS) and ancillary office of

Land Use	Gross Site Area (ha)	Maximum GFA (m <sup>2</sup> )
		sewage treatment works (STW), subject to further study)
Open Space	10.6	-
Ecological Area	12.8	-
Road	9.9	-
<b>Total</b>	<b>87.7</b>	<b>1,200,000<sup>Note</sup></b>

Note:

Excludes the GFA of transport interchanges and underground car parks (49,600m<sup>2</sup>), plants of DCS, electricity sub-stations, fire station cum ambulance depot, plants of STW, potential police facilities in the “G” site at the northern corner of Lok Ma Chau Loop, possible boundary crossing facilities over the district open space to Shenzhen River, and potential sports hall and swimming pool in Ribbon Park.

- RODP is to serve as a basis for the formulation of more detailed proposals including detailed layout, development parameters for individual sites, delineation of various utility/infrastructure provisions, proposals for urban design, landscaping and greening, etc.

### Attachments

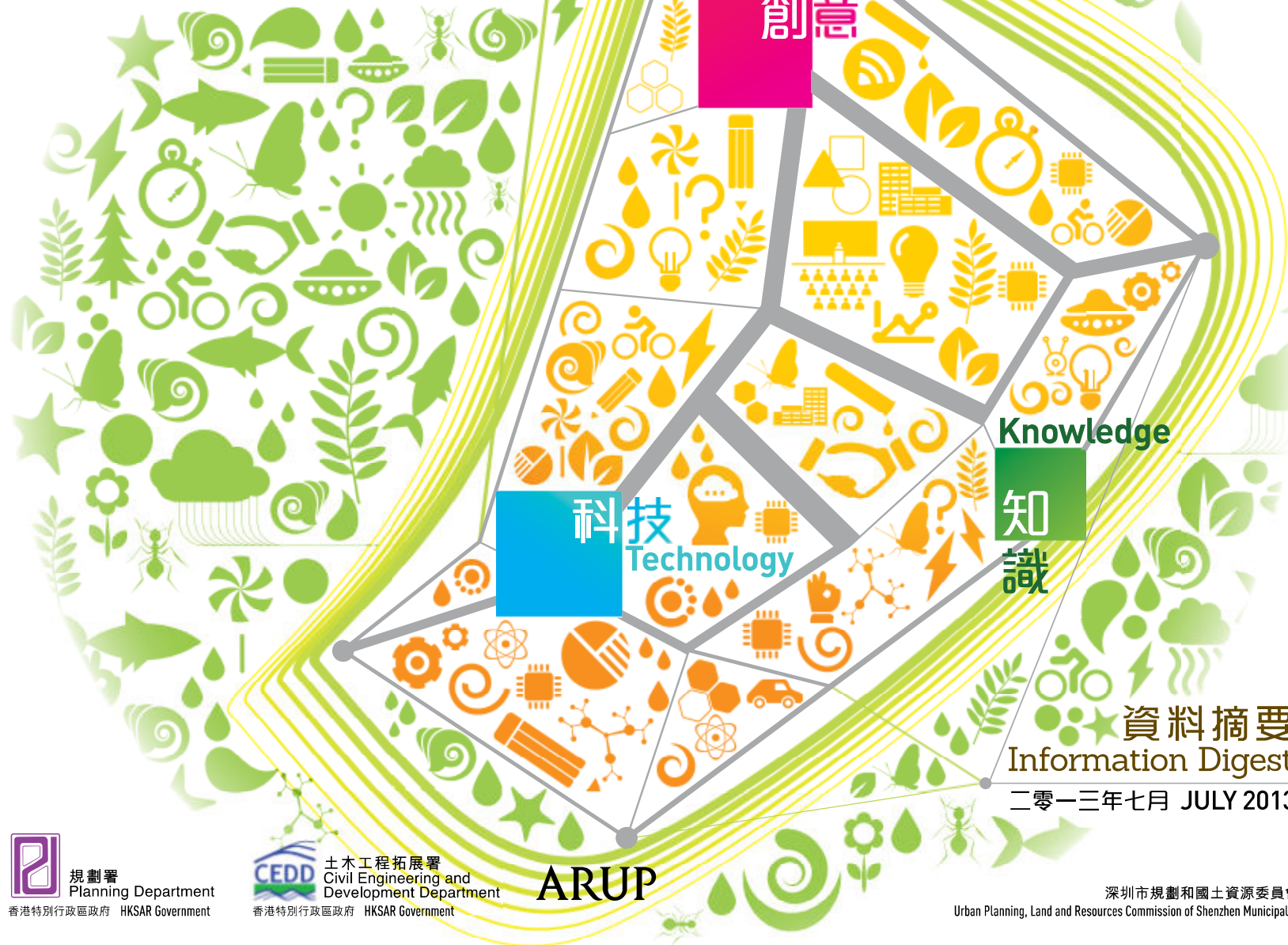
Attachment I - Planning and Engineering Study on Development of Lok Ma Chau Loop – Information Digest

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MAY 2017**

# 落馬洲河套地區

發展規劃及工程研究

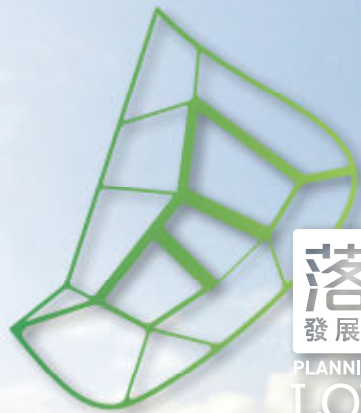
PLANNING AND ENGINEERING STUDY ON DEVELOPMENT OF  
LOK MA CHAU LOOP



資料摘要  
Information Digest

二零一三年七月 JULY 2013





# 落馬洲河套地區

發展規劃及工程研究

PLANNING AND ENGINEERING STUDY ON DEVELOPMENT OF  
LOK MA CHAU LOOP





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**知識和科技交流樞紐**

Under the principle of sustainable development,  
to develop the LMC Loop as a hub  
for cross-boundary human resources  
development within a

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## 引言 Introduction

落馬洲河套地區（下稱“河套地區”）毗鄰香港及深圳邊界，原位於深圳市行政區域內，在1997年深圳河治理工程完成後，納入香港特別行政區行政區域範圍之內。因為獨特的歷史背景，其發展面對很多考慮和限制，包括兩地合作發展的機制、生態環境的保育、污染土的存在和缺乏基礎建設等。

根據2007年完成的「香港2030:規劃遠景與策略」，河套地區擁有位於深圳福田商業區的對岸的戰略位置優勢，能提供發展空間以加強深港合作。港深兩地政府在2008年簽訂了《落馬洲河套地區綜合研究合作協議書》，同意以「**共同研究、共同開發、共享成果**」的原則合作進行河套地區發展規劃研究，《落馬洲河套地區發展規劃及工程研究》（下稱“研究”）於2009年6月展開。

港深兩地政府於2011年11月25日的深港合作會議上簽署了《推進落馬洲河套地區共同開發工作的合作協議書》，作為推進河套地區共同開發工作的基礎性文件。《合作協議書》闡明港深雙方已就河套地區的發展定位、適用法律、土地管理及共同開發機制等重要事項達成初步共識和合作意向。

The Lok Ma Chau Loop (LMC Loop), which is situated in close proximity to the boundary between Hong Kong (HK) and Shenzhen (SZ), was originally within the administrative area of the Shenzhen Municipality. It has then been delineated as part of the Hong Kong Special Administrative Region administrative area following completion of the SZ River Regulation Project in 1997. The unique historical background has posed a number of considerations and constraints on the development of the LMC Loop, including the co-operation mechanism between the two cities, conservation of the ecological environment, presence of contaminated soil, lack of infrastructure in the area, etc.

The “Hong Kong 2030: Planning Vision and Strategy” completed in 2007 has recommended that the LMC Loop, with strategic locational advantage of being near to Futian commercial area across the SZ River, can provide development space to strengthen co-operation between SZ and HK. In 2008, the HK and SZ governments signed a Co-operation Agreement on the undertaking of a joint study for the development of the LMC Loop. “The Planning and Engineering Study on Development of LMC Loop” (the Study) was jointly commissioned by the two governments in June 2009 under the principle of “**co-study, co-development and mutual benefit**”.

At the Hong Kong/Shenzhen Co-operation Meeting held on 25 November 2011, the two governments signed a Co-operation Agreement, which served as the framework to jointly take forward the development of the LMC Loop. The Co-operation Agreement sets out the initial consensus and intention for co-operation reached between the two governments on important issues, including development positioning, applicable laws, land administration and co-development mechanism, etc.



「香港2030:規劃遠景與策略」建議河套地區可提供發展空間加強深港合作  
“Hong Kong 2030: Planning Vision and Strategy” recommended the LMC Loop to provide development space to strengthen co-operation between SZ and HK

未來土地用途公眾諮詢  
Public Engagement on Possible Future Land Use

2009

研究展開 Commencement of the Study

初步發展方案階段－包括第一階段公眾參與  
Preliminary Development Proposal – including Stage 1 Public Engagement

簽署《推進落馬洲河套地區共同開發工作的合作協議書》  
Signing of the Co-operation Agreement to jointly take forward the development of the LMC Loop

建議發展方案階段－包括第二階段公眾參與  
Recommended Development Proposal – including Stage 2 Public Engagement

2007

2008

2010

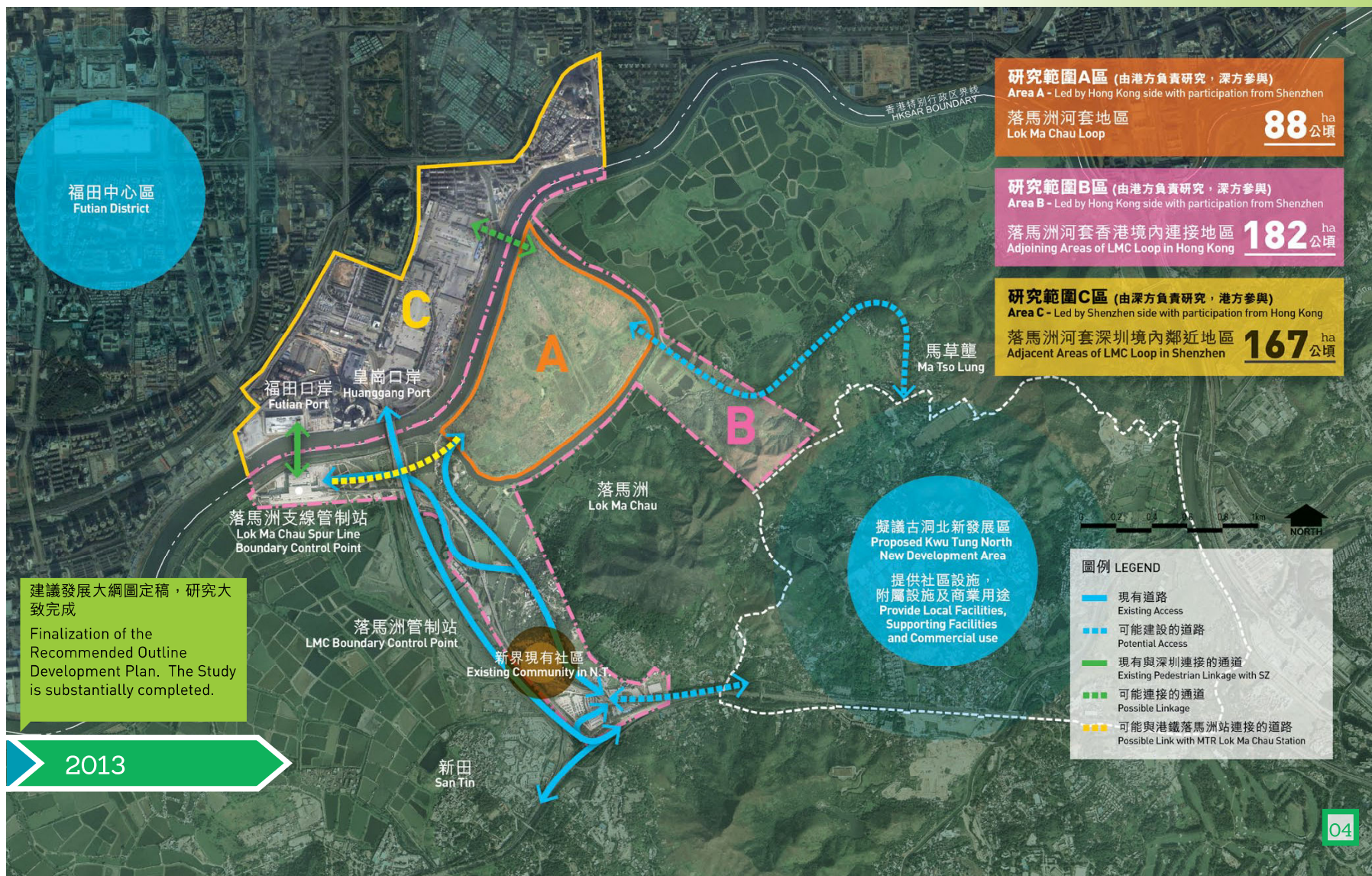
2011

2012



經過了兩階段的公眾參與、規劃研究及詳細的技術評估，研究已大致完成，河套地區的「建議發展大綱圖」已經定稿。這份資料摘要主要向公眾概述公眾參與的成果及研究的最後建議。

After two rounds of public engagement, planning analysis and detailed technical assessments, the Study has substantially been completed with the Recommended Outline Development Plan (RODP) confirmed. This Information Digest is mainly to inform the public the outcome of the public engagement and the final recommendations of the Study.





## 公眾參與 Public Engagement

早在2008年研究開展之前，港深兩地政府已就河套地區的未來土地用途同步進行了公眾諮詢，根據收集到的意見，兩地政府認為河套地區發展可以高等教育為主，輔以高新科技研發及文化創意產業用途。

本研究的公眾參與共分為兩個階段，旨在邀請公眾一同參與河套地區的規劃，透過意見交流，建立共識，制定河套地區的未來發展方向。

第一階段的公眾參與於2010年11月至2011年1月在港深兩地同步進行，主要收集公眾對河套地區的「初步發展大綱圖」及周邊土地的初步發展建議的意見。期間，香港方面舉行了一場公眾論壇，4場巡迴展覽及為不同的委員會包括立法會發展事務委員會、城市規劃委員會、土地及建設諮詢委員會轄下規劃小組委員會、相關的區議會及鄉事委員會、機構及專業團體等舉行了共21場諮詢會/簡報會，共接獲114份書面意見。深圳方面進行的公眾參與活動包括一場公眾論壇、4場巡迴展覽、與不同的持分者如深圳市城市規劃委員會、教育業界、政府職能部門及行業協會舉行諮詢會及簡報會及問卷調查。

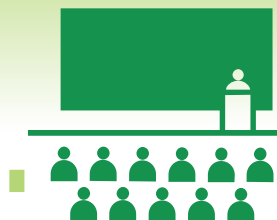
第二階段的公眾參與於2012年5月至7月在港深兩地同步展開，旨在收集公眾對河套地區的「建議發展大綱圖」的意見，以協助推進落實河套地區的發展。期間，香港方面共舉行/出席了9場諮詢會/簡報會及舉辦了2場巡迴展覽，而港深兩地政府總共接獲36份書面意見。\*

As early as 2008 prior to commencement of the Study, the two governments had concurrently undertaken public consultation on possible future land uses for the LMC Loop. Upon consideration of the views collected, the two governments considered that the LMC Loop could be developed with higher education as the leading land use, complemented by high-tech research and development (R&D) and cultural and creative (C&C) industries.

A two-stage public engagement has been carried out in the Study to engage the community in the planning of the LMC Loop with a view to formulating the future direction of the LMC Loop through exchange of views and building of consensus.

The Stage 1 Public Engagement (PE) was carried out concurrently in HK and SZ from November 2010 to January 2011 mainly to seek public views on the Preliminary Outline Development Plan (PODP) for the LMC Loop and the preliminary proposals for its adjoining areas. The HK side organized a public forum, 4 roving exhibitions and a total of 21 consultation meetings/briefing sessions for various boards/committees, including Legislative Council Panel on Development, Town Planning Board, Planning Sub-committee of the Land and Development Advisory Committee, relevant district councils and rural committees, organizations and professional bodies, etc, and a total of 114 written comments were received. On the SZ side, public engagement activities included a public forum, 4 roving exhibitions, consultation meetings/briefing sessions with various stakeholders such as Town Planning Board of SZ Municipality, education institutions, government departments, trade associations, etc, and questionnaire surveys.

The Stage 2 PE was undertaken in HK and SZ concurrently from May to July 2012 to solicit public views on the RODP for the development of LMC Loop. A total of 9 consultation meetings/briefing sessions and 2 roving exhibitions were held in the HK side, and a total of 36 written comments were received by the HK and SZ sides.\*



第一階段  
STAGE 1

11/2010-0

公眾參與  
Public Engagement

香港  
HONG KONG

21場 諮詢會/簡報會  
Consultation Meetings/  
Briefing Sessions  
1場 公眾論壇  
Public Forum  
4場 巡迴展覽  
Roving Exhibitions

114  
書面意見  
Written Comments

初步發展大綱圖  
Preliminary Outline  
Development Plan



1/2011

第二階段  
STAGE 2

05/2012-07/2012

公眾參與  
Public Engagement

1035

問卷調查  
Questionnaires

82

書面意見  
Written Comments

2場

1場

4場

深圳  
SHENZHEN

香港  
HONG KONG

2  
書面意見  
Written Comments

諮詢會/簡報會  
Consultation Meetings/  
Briefing Sessions  
巡迴展覽  
Roving Exhibitions

34  
書面意見  
Written Comments

深圳  
SHENZHEN

建議發展大綱圖

Recommended Outline Development Plan

\*深方同期接獲3份書面意見，但其中一份亦已同時向港方提交，並計算在港方所收集的34份意見之內。  
3 written comments were received by SZ, but one of them was also submitted to HK side simultaneously and has already been counted in the 34 written comments received by HK side.





## 公眾參與的主要意見與回應

### Major Comments Received in Public Engagement and Responses

在第一及第二階段公眾參與收集的主要意見與回應歸納如下。詳細意見及回應，請參閱相關的公眾參與報告。

Major comments collected in Stage 1 and Stage 2 PEs and the responses are summarized below. For details of comments and responses, please refer to the respective PE reports.

## 01

### 發展定位、土地利用及規劃佈局

#### Development Positioning, Land Use and Planning Layout

公眾普遍同意發展高等教育、高新科技研發及文化創意產業用途。有公眾關注河套地區發展如何發揮香港與深圳的協同效應、土地利用的彈性、規劃佈局的細節安排及環保設施等。我們會充份利用河套地區的土地資源，應付兩地日後的發展需要。「建議發展大綱圖」提供了一個彈性的規劃框架，在以高等教育為主要用途下，容許其他主要用途互動交流，達致協同效應。因應公眾意見，高新科技研發及文化創意產業用途將可靈活互換。土地用途的細節安排及各種環保措施的可行性可在詳細設計階段深入探討。

**The public generally agree on the three proposed land uses of higher education, high-tech R&D and C&C industries. Some members of the public raise concerns on how the development of the LMC Loop can achieve a synergy effect for HK and SZ, land use flexibility, details of the planning layout and the green measures. We will optimize the land use resources of the LMC Loop to meet future development needs of the two cities. Under the overarching theme for higher education as the leading land use, the RODP has provided a flexible planning framework which would allow for interactive exchange among the major land uses to achieve synergy effect. In response to the public comments, the RODP has allowed interchangeability of the high-tech R&D and C&C uses. The detailed land use arrangement and provision of various green measures could be further studied in the detailed design stage.**







## 02

### 環境、生態、發展密度及建築物高度

Environmental and Ecological Concerns, Development Intensity and Building Height

環境關注團體對環境及生態（包括雀鳥飛行路線）的影響表示擔憂，建議降低發展密度及建築物高度。根據《環境影響評估條例》擬備的環境影響評估（包括生態影響評估），發展建議不會對河套地區及其周邊地方產生不能接受的环境影響。建議發展規模已平衡了環境生態、土地資源運用、周邊環境、河套地區發展的願景及港深兩地的城市面貌等不同因素。擬議的生態區及緩衝地帶已有足夠面積，以保留現有雀鳥飛行路線和陸地動物走廊。東面連接路的走線已因應公眾意見優化，並作隧道及沉降式道路設計，減低對舊深圳河河曲及魚塘的影響。建築物高度亦已因應公眾意見降低。

**The environmental groups raise concern on the environmental and ecological (including the birds' flight path) impacts, and suggest the development intensity and building height be further reduced.** The Environmental Impact Assessment (EIA) (including the Ecological Impact Assessment) prepared under the EIA Ordinance indicates that the LMC Loop development will not result in unacceptable environmental impacts on the LMC Loop and its surrounding areas. The proposed development intensity has struck a reasonable balance amongst various pertaining factors, including environmental/ecological aspects, utilization of land resources, surrounding environment, the vision of the LMC Loop development, townscape of the two cities, etc. Sufficient land has been set aside for an "Ecological Area" and adjoining buffer zone to preserve the birds' flight path and terrestrial animal passages. Taking account of public comments, the alignment of the Eastern Connection Road (ECR) has been refined and the road has adopted an underpass-cum-depressed design to minimize impacts on the old SZ River meander and fish ponds. The building height has also been reduced in response to public comments.

## 03 對周邊地區的影響

### Impacts on the Surrounding Areas



地區人士支持河套發展，但擔心周邊發展機會被凍結及關注道路容量、防洪措施、賠償及對居民的影響等。同意可加強周邊地區特別是落馬洲路一帶的發展以配合河套地區發展，但須詳細考慮生態及基建設施容量的限制。香港方面將會在研究新界北部地區進一步發展時，探討河套周邊地區的發展潛力。在河套地區發展過程中會盡量避免影響私人土地及現有民居，並尊重居民及土地業權人的權益。技術評估顯示河套地區發展並不會加劇水浸風險，而建議的交通運輸配套亦足以應付未來河套地區發展的交通需求。

**While supportive of the LMC Loop development, the locals worry about freezing of development potential of the surrounding areas and raise concern on road capacity, flood protection measures, compensation and disturbance to local residents.** While it is agreed that the surrounding areas, in particular, areas along Lok Ma Chau Road, can be considered for more intensive development, the ecological and infrastructure capacity constraints should be duly considered. The development potential of the surrounding areas of the LMC Loop would be further examined under the study on developing the New Territories North to be undertaken by the HK side. During development of the LMC Loop, endeavours will be made to avoid encroachment upon private land and existing settlements, and rights of locals and private land owners will be duly respected. The technical assessments indicate that the LMC Loop development will not aggravate the flood risk, whereas the proposed transport and traffic measures will be able to cope with the future traffic demand of the LMC Loop development.







## 04 對外及對內的交通運輸安排 External Connectivity and Internal Transport



公眾普遍支持對外連接及內部交通運輸安排，建議連接港鐵落馬洲站的運輸模式以軌道交通為基礎及將運輸交匯處設於河套地區外。研究已建議一系列運輸網絡連接河套地區及香港和深圳的鄰近地區，包括兩條分別連接新田公路及擬議古洞北新發展區的道路；一條連接港鐵落馬洲站的直接道路；及一條可能與深圳連接的通道及相關過境設施(有待進一步研究)。但考慮到收地的需要及對環境的影響，運輸交匯處應設於河套地區內。

**The public generally support the external and internal transport arrangements of the LMC Loop development. Some suggest adopting rail-based transport mode as a direct link between the LMC Loop and the MTR LMC Station, while others suggest relocating the transport interchange (TI) outside the LMC Loop.** A comprehensive transport network is proposed to link the LMC Loop with the other areas in HK and SZ, including the two connection roads connecting respectively to San Tin Highway and the proposed Kwu Tung North New Development Area (KTN NDA); a direct link to the MTR LMC Station and a possible link with SZ with associated boundary crossing facilities (subject to further study). Having regard to the need for land resumption and impacts on the environment, it is still considered appropriate to locate the TI within the LMC Loop.



## 05 發展細節及執行模式 Details of Development and Implementation Mechanism



不同持分者關注河套地區的發展模式、業權和落實發展的安排等，並認為港深兩地政府應加快落實發展，抓緊與珠三角地區的策略發展機遇。港深兩地政府會繼續透過「落馬洲河套地區開發模式工作小組」及「落馬洲河套地區高等教育發展工作小組」積極進行磋商，盡早落實發展模式。

**Different stakeholders have raised concerns on the mode of development, land ownership and implementation arrangement, etc, and consider that both governments should expedite the implementation of the LMC Loop development so as to capture the opportunities of strategic development in the Pearl River Delta Region.** Both HK and SZ governments will continue active discussions through the Working Group on Mode of Development of LMC Loop and Working Group on Higher Education Development in LMC Loop to establish in earnest the details of the mode of development for the LMC Loop.

## 河套地區城市規劃的目標

### Planning Objectives of the LMC Loop

河套地區發展以高等教育為主，輔以高科技研發和文化創意產業用途。

*The LMC Loop is to be developed with higher education as the leading land use, complemented by high-tech R&D and C&C industries.*

河套地區發展整體目的是在港深兩地互惠互利的基礎上，締造河套成為一個可持續發展、環保、節能及以人為本的地區。

The overarching objective for development of the LMC Loop is to develop a sustainable, environmentally friendly, energy-saving and people-oriented community on the basis of mutual benefit to both HK and SZ.

## 規劃及設計綱領

### Planning and Design Principles

#### 指導原則

#### Guiding Principles





## 功能分區 Functional Zones

河套地區是以高等教育為主，輔以高新科技研發及文化創意產業的知識科技交流區，佈局上可分為五個功能分區。

The LMC Loop, which is to be developed with higher education as the leading land use and complemented by high-tech R&D and C&C industries, can be divided into 5 functional zones.



## 教育區 EDUCATION ZONE

在河套地區中部的教育區將提供教育與研究設施、圖書館、辦公室和其他高等教育的附屬設施。

The Education Zone located in the middle part of the LMC Loop provides teaching and research facilities, library, offices and other ancillary facilities for higher education.

## 創新區 INNOVATION ZONE

在東部及西部臨水的創新區是高新科技研發和文化創意產業的樞紐，可提供辦公室、研究、演講及展覽設施等。

The Innovation Zone located along the waterfront in the eastern and western parts of the LMC Loop is a hub for high-tech R&D and C&C industries providing offices, research, lecture and exhibition facilities, etc.

## 交流區 INTERACTION ZONE

位處核心的交流區將為一開放公共空間，促進知識及科技交流區用戶的互動。通過各種活動的安排，可提供一個思想交流和文化活動的平台。

The Interaction Zone located in the central core will be an open air public space to facilitate interactions among users of the KTEZ. It provides a platform for exchange of ideas and cultural activities through organization of various activities.

## 生態區 ECOLOGICAL ZONE

南部的生態區將是河套地區的重要特色，除了保存地區生物的多樣性，亦提供河套地區與附近鄉郊的緩衝過渡。

The Ecological Zone in the south is a landmark of the LMC Loop. In addition to preserving the biodiversity of the area, it also provides a buffer contributing to a transition between the surrounding rural landscape and the LMC Loop.

## 濱河休憩區 RIVERSIDE PROMENADE ZONE

全長約2公里的濱河休憩區將為教育、高新科技研發及文化創意產業提供一個優美的臨水環境，並體現將來與深圳河對岸濱河區互相呼應的理念。

The 2km long Riverside Promenade Zone will provide a pleasant waterfront environment for the education, high-tech R&D and C&C uses. It also echoes with the future riverside area across the SZ River.



## 建議發展大綱圖

### Recommended Outline Development Plan

#### 發展參數

##### DEVELOPMENT PARAMETERS

最高總樓面面積

Maximum Gross Floor Area

1,200,000 平方米  
m<sup>2</sup>

主要包括

Including mainly

教育  
Education 720,000 平方米  
m<sup>2</sup>  
(包括宿舍 Including hostels)

高新科技研發/ 文化創意產業  
High-Tech R&D / C&C Industries 411,000 平方米  
m<sup>2</sup>

商業  
Commercial 60,000 平方米  
m<sup>2</sup>

總地積比率

Gross Plot Ratio

1.37

建築物高度(最高)

BUILDING HEIGHT (MAX.)

教育用途

Education Use

10 層  
storeys

高新科技研發/文化創意產業

High-Tech R&D / C&C Industries

12 層  
storeys

商業用途

Commercial Use

9 層  
storeys

最高學生人數

Maximum Number of  
Students

24,000

就業機會(約)

Employment Opportunities  
(approx.)

29,000

河套地區發展的總土地面積為87.7公頃，參考港深兩地鄰近地區的發展密度及周邊地區特色，「建議發展大綱圖」的建議最高總樓面面積為1,200,000平方米，其中720,000平方米作高等教育用途及411,000平方米作高新科技研發和文化創意產業用途，總地積比率約為1.37倍，建築物高度由兩層至最高12層。在「建議發展大綱圖」上，以上三大主要用途的用地約佔31公頃(約36%總土地面積)，休憩用地、美化地帶/活動走廊及生態區的用地約佔39公頃(約45%總土地面積)，其餘用地為商業、政府設施、交通設施及道路等。

The LMC Loop has a total land area of 87.7 hectares. Taking account of the development intensities and character of neighbouring areas in HK and SZ, the maximum total gross floor area (GFA) as recommended in the RODP is 1,200,000m<sup>2</sup>, including 720,000m<sup>2</sup> GFA for higher education use and 411,000m<sup>2</sup> GFA for high-tech R&D and C&C use. The gross plot ratio is about 1.37 and building heights range from 2 storeys to a maximum of 12 storeys. On the RODP, the three major land uses occupy approximately 31 hectares (approximately 36% of total land area). Open spaces, amenity areas/activity corridors and Ecological Area occupy approximately 39 hectares (approximately 45% of total land area), whereas the rest of land is occupied by uses such as commercial, government and transport facilities, roads, etc.



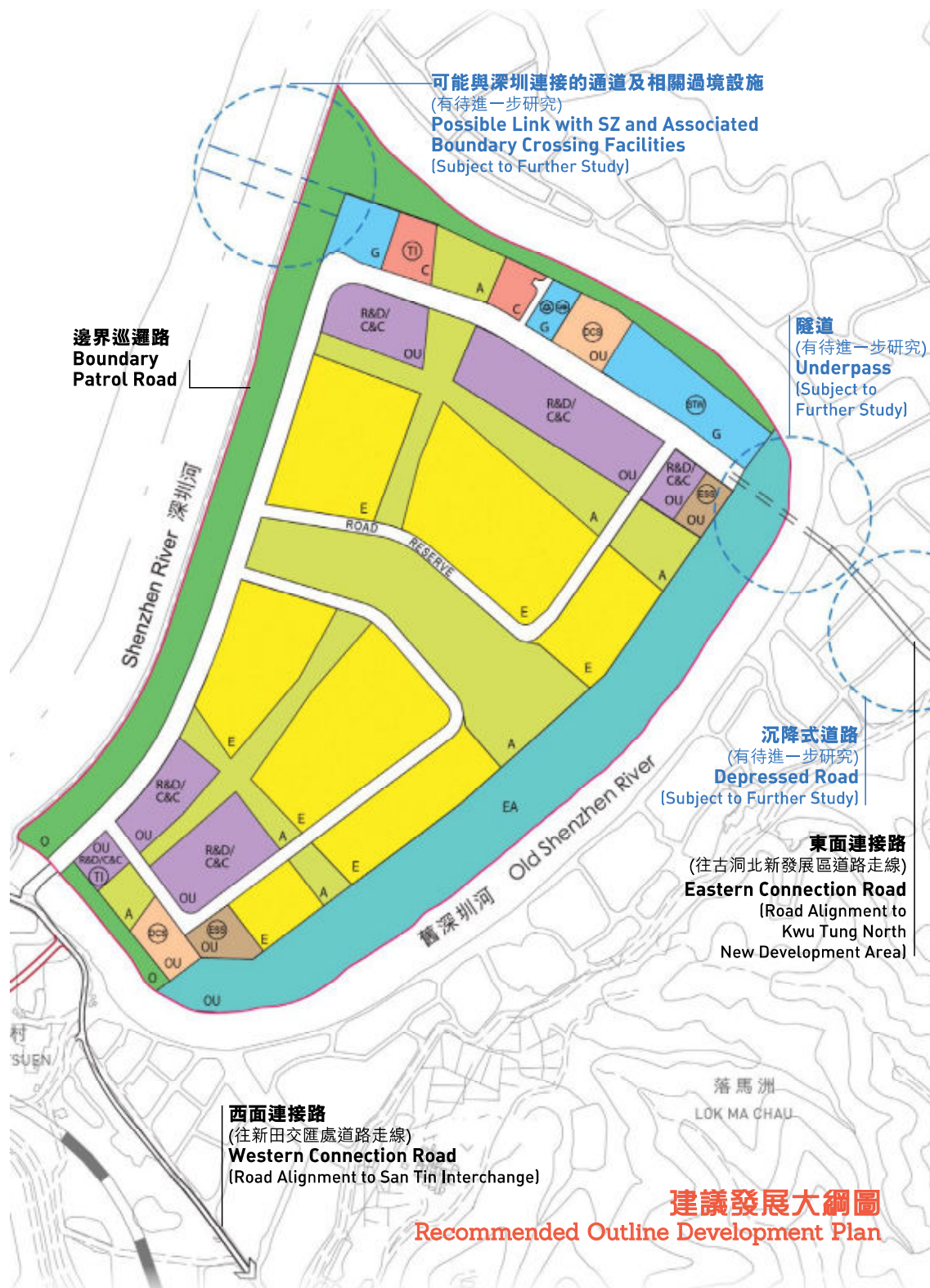
0 100 200 300 400米

港鐵落馬洲站  
MTR Lok Ma Chau Station

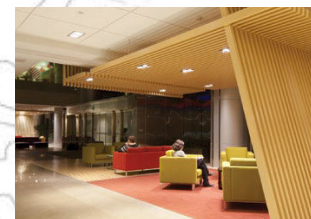
連接港鐵落馬洲站的直接道路  
(建議路面環保公共交通工具)  
(只作指示用途及有待進一步研究)

Direct Link to MTR Lok Ma Chau Station  
(Recommended road-based environmentally  
friendly public transport)  
(Indicative only and subject to further study)





土地用途 Land Uses	公頃 Hectares	%
E 教育 Education	22.8	26
C 商業 Commercial	0.5	0.6
CTI 商業及運輸交匯處 Commercial cum Transport Interchange	0.7	0.8
G 政府 (連可能相關過境設施) Government (with Possible Associated Boundary Crossing Facilities)	0.8	0.9
STW 政府 (污水處理廠) Government (Sewage Treatment Works)	2.1	2.4
DCS 政府 (消防局暨救護站) Government (Fire Station-cum-Ambulance Depot)	0.4	0.5
O 休憩用地 Open Space	10.6	12.1
A 美化地帶/活動走廊 Amenity/Activity Corridor	15.9	18.1
EA 其他指定用途 (生態區) Other Specified Uses (Ecological Area)	12.8	14.6
R&D/C&C 其他指定用途 (高新科技研發/文化創意產業) Other Specified Uses (High-tech Research & Development / Cultural & Creative Industries)	8.2	9.4
CTI 其他指定用途 (高新科技研發/文化創意產業及運輸交匯處) Other Specified Uses (High-tech Research & Development / Cultural & Creative Industries cum Transport Interchange)	0.4	0.5
DCS 其他指定用途 (區域供冷系統) Other Specified Uses (District Cooling System)	1.6	1.8
ESS 其他指定用途 (變電站) Other Specified Uses (Electricity Sub-Station)	1.0	1.1
道路等 Roads, etc.	9.9	11.2
<b>總計</b>	<b>87.7</b>	<b>100.0</b>





## 城市設計 Urban Design

### 設計佈局 Layout Design

靈活的设计佈局將可容納一系列的建築物類型，以應付不同的功能及活動需要。加上不同類型的休憩用地及景觀設計元素，河套地區將會是一個充滿活力的教育、科技研發及文化創意產業地區。

The flexible layout design of the LMC Loop can support an array of building types to cater for different functions and activities. Together with different types of open space and landscape components, the LMC Loop will be a vibrant area for higher education, high-tech R&D and C&C uses.

### 建築物高度輪廓 Building Height Profile

建議採用低矮的建築物高度輪廓（由兩層至最高12層），建築物高度向深圳河及生態區/舊深圳河河曲遞減，確保視野更為廣闊，並使建築物與周邊景致融合一起。

A low-rise building height profile (from 2 storeys to maximum 12 storeys) with building heights descending towards the SZ River and the Ecological Area/Old SZ River Meander is proposed to allow better visual permeability and integration with the surrounding setting.





## 城市設計大綱 Urban Design Framework

落馬洲  
Lok Ma Chau

0 100 200 300 400m 米



只作說明用途(有待詳細設計)  
For illustration only  
(Subject to detailed design)

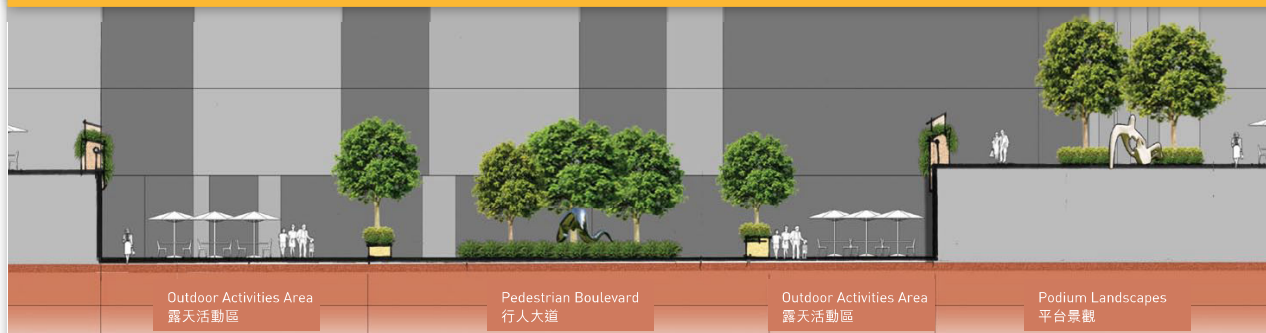
### 視覺走廊 Visual Corridor



南北走向的帶狀公園及景觀連接體將是區內的視覺走廊，提供河套地區與深圳濱河區及與香港鄉郊的視覺連繫。

The north-south running Ribbon Park and Green Connectors serve as visual corridors for the LMC Loop providing visual linkage with the riverfront areas of SZ and with the rural landscape on HK side.

### 通風走廊 / 活動走廊 Wind Corridor / Activity Corridor



河套地區中心向東西延伸的「行人大道」是區內的通風走廊。大道兩旁將設有街舖及零售設施，如咖啡室和書店，鼓勵人流聚集，這活動走廊將讓河套地區朝氣蓬勃及充滿活力。

The Pedestrian Boulevard extending to the east and west in the central part of the LMC Loop is the wind corridor. There will be active building frontages and retail facilities such as cafes and bookstores along the boulevard with a view to encouraging people to gather. This activity corridor will make the LMC Loop a bustling and vibrant place.

帶狀公園  
Ribbon Park

生態區(濕地)  
Ecological Area (Wetland)



## 休憩用地與園景設計

### Open Space and Landscape Design

河套地區將提供多用途的休憩用地，供用戶享用。區內三種不同的休憩空間及濱河休憩區將能容納多元化的活動和功能，為用戶提供不同的綠化空間體驗。

The LMC Loop will provide multi-functional open spaces for public enjoyment. **Three main types of open space and the Riverside Promenade** will cater for diverse activities/functions and provide its users with different green space experience.



#### 01 行人大道 Pedestrian Boulevard

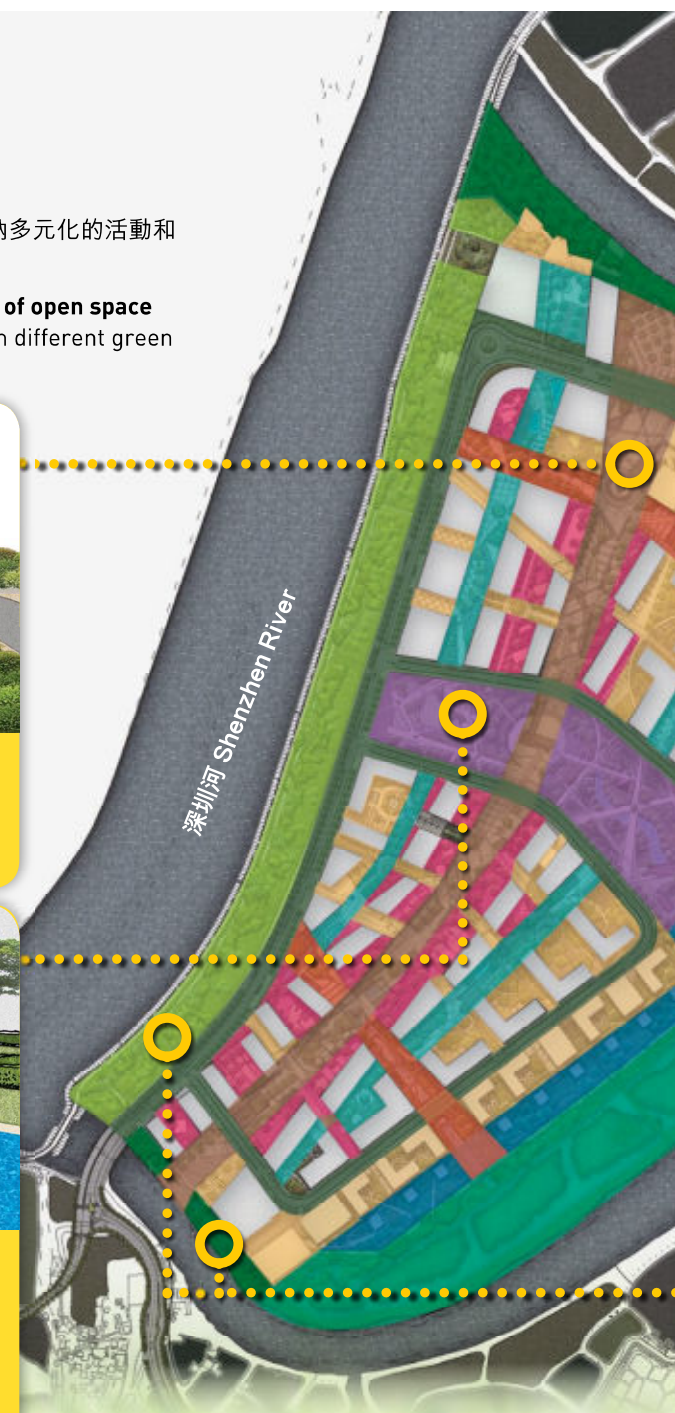
東西走向的「行人大道」是河套地區的主要活動走廊，設計以匯聚人流及提升行人主軸的綠化為主。The east-west running Pedestrian Boulevard serves as the prime activity corridor of the LMC Loop with a design intent to encourage people to congregate and to enhance greenery of the pedestrian spine.



#### 02 帶狀公園 Ribbon Park

南北走向的帶狀公園具有綠色緩衝帶的功能，為建築群提供自然綠化及靜態休憩空間，這些公園的設計以自然景觀和本地植物為本。

The north-south running Ribbon Park serves as a green buffer for the development clusters and provides natural greenery and a passive recreational space between buildings. This will be designed with natural landscape elements and local plant species.





## 景觀大綱 Landscape Framework



只作說明用途(有待詳細設計)  
For illustration only  
(Subject to detailed design)



### 03 庭院空間 Courtyard Spaces

個別發展地塊內將設有庭院空間，營造戶外及半戶外的怡人綠化環境。  
Individual development plots will be provided with courtyard spaces to create an intimate outdoor and semi-outdoor green environment.



### 濱河休憩區 Riverside Promenade Zone

濱河休憩區將為河套提供臨水綠化空間，作休憩及靜態康樂用途。  
The Riverside Promenade Zone provides a green waterfront for leisure and passive recreational purposes.



# 河套地區城市規劃的特色

## Highlights of Planning of the LMC Loop

### 01 融入大自然的環境 An environment that harmonizes with nature

#### 生態區 ECOLOGICAL AREA

在河套地區南/東南端預留約12.8公頃（約15%總土地面積）生態區，以補償因河套地區發展而受影響的現存蘆葦叢、維持區內生態走廊及幫助維持周邊濕地的連貫性。

#### 緩衝區 BUFFER ZONE

在河套地區內毗鄰「生態區」的位置設立一個闊50米及用作低層建築的緩衝區，以盡量避免干擾周遭的生態。緩衝區將會種植各式各樣的樹木及灌木，進一步緩和對生態敏感地帶潛在的影響。

#### 東面連接路的設計 DESIGN OF ECR

為盡量減低對生態及環境的影響，優化東面連接路的設計及走線。經過舊深圳河河曲及附近魚塘的路段將分別以隧道和沉降式道路形式興建，減低對魚塘、視覺及雀鳥飛行路線的潛在影響。部分路段亦會提供動物活動走廊，以減低對陸地動物的影響。



#### 不反光建築 NON-REFLECTIVE BUILDINGS

鼓勵在區內的樓宇外牆使用不反光物料及合適的玻璃裝置，以減低視覺影響及對雀鳥的潛在影響。

#### 低建及綠化的環境 LOW-RISE AND GREEN ENVIRONMENT

低建及大量綠化令河套地區的發展能與周邊地區的自然及鄉郊環境融合，渾然一體。

和諧舒適環境源自於  
融合周邊景觀、保育  
自然生態和維護生物  
多樣性。

A harmonious environment  
stems from integrating  
with surrounding  
landscape, conserving  
natural habitats and  
maintaining biodiversity.



To compensate for the existing reedbed to be affected by the LMC Loop development, to maintain an ecological corridor, as well as to help maintain connectivity of the surrounding wetlands, an Ecological Area of 12.8 hectares (approximately 15% of the total land area) is proposed along the southern/southeastern boundary of the LMC Loop.

Adjoining the Ecological Area is a 50m-wide buffer zone designated for low-rise buildings to avoid disturbance to the ecology of the adjacent areas. Planting of various species of trees and shrubs in the Buffer Zone can further mitigate potential impacts on ecologically sensitive areas.

The design and alignment of ECR is optimized with a section of underpass-cum-depressed road under the old SZ river meander and fish ponds respectively in order to minimize impacts on fish ponds, potential visual impact and disturbance to birds' flight path. Animal passage will also be provided at some sections of ECR to minimize impact on terrestrial animals.



To minimize visual impacts and potential impacts on birds, the use of non-reflective façade material and appropriate glass installations will be encouraged for buildings within the LMC Loop.

Low-rise and extensive greening ensure the LMC Loop development integrating with the natural and rural setting of the surrounding areas.



## 02 促進產學研交流互動的宜人環境 An intimate environment conducive to interaction among Production, Education and Research

- **知識及科技交流樞紐** A KNOWLEDGE AND TECHNOLOGY EXCHANGE ZONE  
河套地區內的高等教育用途將提供知識交流的平台，而高新科技研發及文化創意產業將擔當促進創新技術的角色。  
Higher education uses in the LMC Loop provide a platform for knowledge exchange, while high-tech R&D and C&C industries play the role of promoting technology innovations.

- **地方營造促進交流** PLACE MAKING FOR INTERACTION  
由河套地區中心延伸的「行人大道」是一個促進用戶知識和文化交流的平台及充滿活力的公共空間。建築物之間的庭院式休憩空間，營造怡人環境，促進周邊用戶進行互動交流。  
The Pedestrian Boulevard, extending across the centre of the LMC Loop, is a platform for interaction and exchange of knowledge and culture, as well as a vibrant public space. The courtyard spaces between building clusters can create an intimate environment to facilitate interflows and exchanges among different users.

營造公共空間，  
促進產學研互動  
交流。

*Public space making  
can foster interactions  
of production,  
educational and  
research activities.*





## 03 低碳及環保的地區 Low-carbon and green community

### ● 碳吸存

#### CARBON ABSORPTION

種植一些具有較高吸碳排放能力的植物。

Plants that have higher carbon absorbing capacity will be grown.

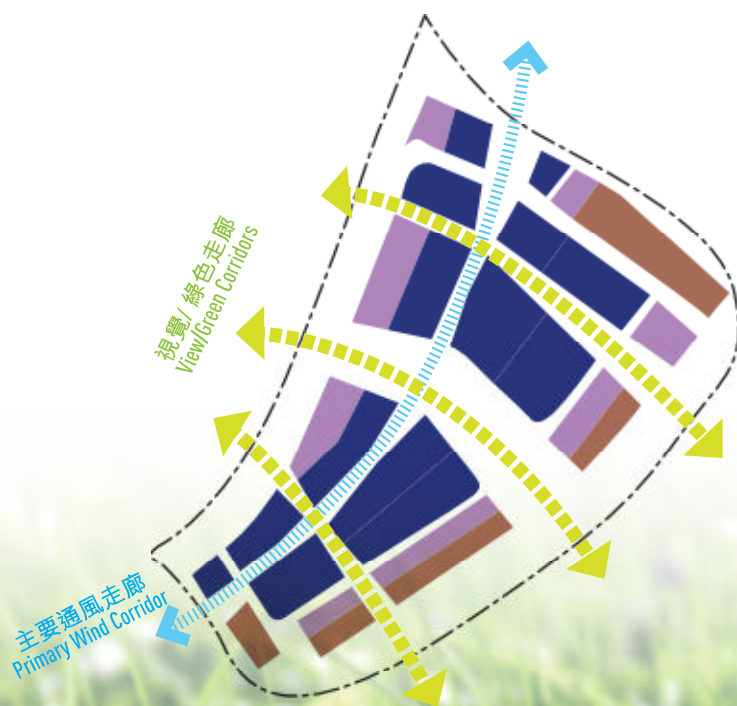
### ● 通風走廊

#### WIND CORRIDOR

預留足夠通風走廊，避免屏風效應，並為區內行人提供一個舒適的風環境。

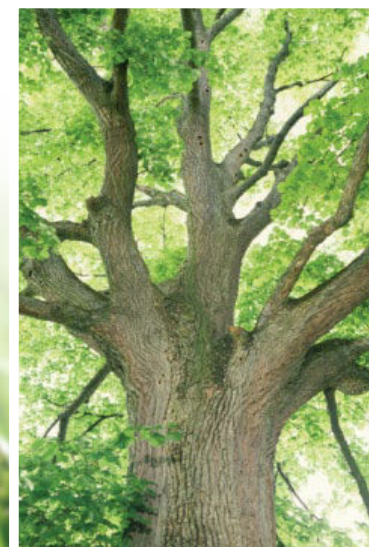
Sufficient areas are designated as wind corridors to provide a comfortable wind environment for pedestrians.

減低19-33%  
溫室氣體排放量  
Greenhouse gas emission  
can be reduced by  
19-33%



#### 圖例 LEGEND

- 中層建築  
Medium Rise Building
- 低至中層建築  
Low-to-Medium Rise Building
- 低層建築  
Low Rise Building







透過一系列綠色設施，減少耗用能源及天然資源。

*A package of green measures will reduce consumption of energy and natural resources.*

## ● 綠色運輸系統

### ENVIRONMENTALLY FRIENDLY TRANSPORT SYSTEM

河套地區內部交通運輸將會配合低碳目標，鼓勵區內使用環保車輛（例如環保巴士或電動交通工具）及單車作為綠色運輸工具。

Internal transportation within the LMC Loop aligns with the 'low-carbon' objective. The use of green transportation modes (e.g. green bus or electric vehicles) and cycling will be encouraged.



## ● 綠化及綠色建築

### GREENING AND GREEN BUILDINGS

屋頂及外牆綠化將有助樓宇隔熱，從而增加能源效益。發展地盤內提供約至少30%綠化面積將有助減低熱島效應，並為區內行人提供舒適的步行環境。綠色建築將有效達致節能減排。

Roof-top and vertical greening will help thermal insulation of buildings to enhance energy efficiency. Development plots within the LMC Loop will achieve a greening ratio of at least 30% to help reduce the heat island effect and to provide a comfortable pedestrian environment. Green building design will effectively achieve energy-saving and reduction of greenhouse gas emission.



## ● 經處理污水循環再用

### REUSE OF TREATED SEWAGE EFFLUENT

循環再用經處理的污水作非飲用用途(如作沖廁及灌溉用途)有助節約用水及減低污染排放。

Reuse of treated sewage effluent for non-potable purposes (e.g. flushing and irrigation) can help conserve water and reduce pollution discharge.





# 04 便捷交通及高可達性 Convenient Transport and High Accessibility



提供高可達性及便捷的交通連繫。

Highly accessible and convenient transport connection will be provided.

研究範圍C區 (由深圳市政府負責，發展建議協同A區發展)  
Study Area C (Undertaken by Shenzhen Municipal Government in co-operation with the development proposals in Area A)

## 圖例 LEGEND

- 《邊境禁區土地規劃研究》所建議的發展走廊地帶  
Development corridor recommended in the Frontier Closed Area Study
- 現有道路  
Existing Access
- 可能建設的道路  
Potential Access
- 現有與深圳連接的人行通道  
Existing Pedestrian Linkage with SZ
- 可能連接的通道  
Possible Linkage
- 與港鐵落馬洲站連接的直接道路  
Direct Link with MTR Lok Ma Chau Station
- 落馬洲支線  
LMC Spurline
- 研究中的北環線  
Northern Link Under Study
- 現有/已規劃的鐵路站  
Existing/Planned Railway Station





河套地區與周邊地區的连接建議包括:  
Proposals connecting the LMC Loop  
and its surrounding areas include:

1

透過改善下灣村路及落馬洲路以接駁新田公路，提供西面連接路

Provision of Western Connection Road by improving existing Ha Wan Tsuen Road and Lok Ma Chau Road with connection to San Tin Highway

2

建造一條連接擬議古洞北新發展區(區內擬設鐵路站)的道路，提供東面連接路

Provision of ECR to the proposed KTN NDA within which a railway station is proposed

3

建造一條連接河套地區與港鐵落馬洲站的直接道路，以路面環保運輸模式運作(有待進一步研究)

Provision of a Direct Link to MTR LMC Station. Subject to further study, a road-based environmentally friendly public transport mode can be considered

4

提供穿梭巴士來往河套地區與新界西部、古洞北及新田交匯處

Provision of shuttle bus between the LMC Loop and New Territories West, KTN and San Tin Interchange

5

視乎將來鐵路北環線的詳細建議，或可經港鐵落馬洲站接駁至北環線沿線各站

Possible linkage with Northern Link (NOL) stations via MTR LMC Station subject to the detailed proposal of NOL in future

6

考慮設置可能與深圳連接的通道及相關過境設施(有待進一步研究)直接連接河套地區和深圳

Subject to further study, provision of a possible link with SZ and associated boundary crossing facilities for a direct connection between the LMC Loop and SZ





## 技術及環境影響評估

### Technical and Environmental Impact Assessments

本研究相關的技術評估報告已經完成，結果顯示河套地區的發展從運輸及交通、污水排放、供水及公用設施、地盤平整等技術層面上是可行的。此外，本研究亦完成按香港的《環境影響評估條例》進行的環境影響評估，深入考慮環境影響和適當的緩解措施。為保護生態系統，及確保土地利用與保護生物多樣化能夠並行不悖，河套地區已採用不同的措施，以盡量減低發展對周邊環境的影響。

Relevant technical assessments of the Study have been completed. The results demonstrate that the LMC Loop development is technically feasible in terms of transport and traffic, sewerage, water supply, utilities, site formation aspects, etc. In addition, the EIA completed under EIA Ordinance has examined in detail the possible environmental impacts and recommended appropriate mitigation measures. In endeavours to protect the ecological system and to reconcile land development and conservation of biodiversity, different measures will be adopted in the LMC Loop to minimize the impacts of the development on the surrounding environment.







港深兩地政府於2011年11月25日召開的深港合作會議上簽署了《推進落馬洲河套地區共同開發工作的合作協議書》，作為推進河套地區共同開發工作的基礎性文件。雙方同意在「一國兩制」大原則下，按「共同開發、共享成果」原則，合作推動河套地區發展並且同意把河套地區作為「港深特別合作區域」。港深兩地政府會繼續就河套地區的開發模式商討，以訂定具體的執行安排，推進河套地區的發展。

At the Hong Kong/Shenzhen Co-operation Meeting on 25 November 2011, the two governments signed a Co-operation Agreement as the framework to jointly take forward the development of the LMC Loop. Both sides agreed to jointly develop the LMC Loop under the principle of "One Country Two Systems" and adopt "co-development and mutual benefit" as the principle to co-develop the LMC Loop as a "Hong Kong/Shenzhen Special Co-operation Zone". Both governments will continue to discuss the mode of development with a view to formulating detailed implementation arrangements to take forward the LMC Loop development.

本研究已大致完成，緊接工作包括為河套地區制訂法定分區計劃大綱圖、確立河套地區的發展模式、執行管理及運作安排。河套地區發展的詳細設計亦會在詳細設計階段繼續進行諮詢。「落馬洲河套地區開發模式工作小組」及「落馬洲河套地區高等教育發展工作小組」將會繼續討論河套地區的發展模式和高等教育發展的具體安排，以推進落實河套地區的發展。

The Study has substantially been completed. Work will immediately commence on the preparation of the statutory outline zoning plan and establishing details of the mode of development, implementation mechanism and operational arrangement for the LMC Loop development. Consultation on the detailed proposals for the LMC Loop will continue at the detailed design stage. The Working Group on Mode of Development of the LMC Loop and the Working Group on Higher Education Development in the LMC Loop will continue the discussion on details of the mode of development and higher education development with a view to facilitating the implementation of the LMC Loop development.





# 落馬洲河套地區

發展規劃及工程研究

PLANNING AND ENGINEERING STUDY ON DEVELOPMENT OF  
LOK MA CHAU LOOP

關於本研究更詳盡資料可瀏覽研究網頁：

More information of this Study is available at the Study websites:



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## **Annex II Lok Ma Chau Loop - Technical Review of Development Mix**

On 3 January 2017, the Government of the Hong Kong Special Administrative Region and the Shenzhen Municipal People's Government signed the Memorandum of Understanding of Jointly Developing the Lok Ma Chau Loop by Hong Kong and Shenzhen (2017 MOU) agreeing to develop the Lok Ma Chau Loop into 'Hong Kong – Shenzhen Innovation and Technology Park' (IT Park), setting up a key base for scientific research, as well as relevant higher education, cultural and creative and other complementary facilities in the IT Park. The IT Park will provide a maximum total gross floor area (GFA) of 1.2 million square metre, for flexible allocation for research and development (R&D), higher education, and cultural and creative industries (C&C) uses where appropriate.

2. A review had been undertaken by Civil Engineering and Development Department (CEDD) and Planning Department to confirm the technical feasibility of the flexible development mix amongst the three main uses of higher education, R&D and C&C uses, the possible impacts and mitigation measures, if required.

### **Lok Ma Chau Loop Planning and Engineering Study**

3. In June 2009, the 'Planning and Engineering Study on Development of Lok Ma Chau Loop' (LMCL P&E Study) was undertaken. Taking into account the public aspiration for a greater degree of interchangeability among the three land uses

(i.e. higher education, R&D and C&C uses) for the Lok Ma Chau Loop development, a flexible development approach of 1.2 million m<sup>2</sup> GFA was adopted to work out a Recommended Outline Development Plan (RODP) for developing these three main uses. To support the Lok Ma Chau Loop development, supporting external and internal road link, sewage treatment work and other infrastructure/facilities are also planned.

### **Development Mix of Three Main uses**

4. According to the RODP formulated under the LMCL P&E Study, development within the Lok Ma Chau Loop is subject to a maximum total GFA of 1.2 million m<sup>2</sup> which include 720,000m<sup>2</sup> for higher education, 411,000 m<sup>2</sup> for R&D/C&C uses and 60,000 m<sup>2</sup> for supporting commercial uses<sup>1</sup>. For the proposed development (i.e. the 'Original Scenario' of about **1.13 million m<sup>2</sup> GFA with 36%:64% for R&D/C&C, and higher education** respectively), technical assessments including Environmental Impact Assessment (EIA), Geotechnical Assessment and Site Investigation, Land Requirement Study, Transport and Traffic Impact Assessment, Drainage Impact Assessment, Sewerage Impact Assessment, Water Supply and Utilities Impact Assessment, Site Formation Assessment, Air Ventilation Assessment, Socio-Economic Impact Assessment, Sustainability Assessment and Green Initiatives Assessment have been undertaken to confirm the technical feasibility.

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<sup>1</sup> For details, please refer to the land use schedule table of the RODP for Lok Ma Chau Loop development in **Annex I**.

5. As per the 2017 policy direction, the Lok Ma Chau Loop would be developed for the three uses of higher education, R&D and C&C uses as recommended under the LMCL P&E Study. Whilst the development in the IT Park would still be subject to a maximum total GFA of 1.2 million m<sup>2</sup>, there could be a flexible allocation of GFA amongst the three uses where appropriate to meet the changing situation and needs of the economic development. Based on a desk top assessment undertaken by CEDD, it is confirmed that the planned infrastructure and facilities could support a development mix of up to 70% (about 791,700m<sup>2</sup>) for R&D/C&C and the remaining 30% (about 339,300m<sup>2</sup>) for higher education under the Baseline Scenario (as compared with 36%:64% under the Original Scenario). Apart from the shift in the proportion of the three main uses, other supporting commercial, government, institution and community and infrastructure facilities remained the same. A comparison of the development mix under Original and Baseline Scenarios is summarized at **Table 1**.

6. It is noted that the project proponent (i.e. the Hong Kong Science and Technology Parks Corporation or its subsidiary company) will commence its preparation work, including engaging consultants to study the position and mode of operation of the IT Park, the institutional set-up and requisite staff of the subsidiary company, and the setting up of a professional team responsible for superstructure planning and connecting with relevant departments of the HKSAR Government.

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## **Baseline Scenario - Review of Technical Feasibility**

### ***Traffic and Transport Aspects***

7. To cater for the Lok Ma Chau Loop development, the following external roads are proposed:

- a) Western Connection Road (WCR) which will connect the western part of the Lok Ma Chau Loop to the external road network by upgrading the existing Lok Ma Chau Road and Ha Wan Tsuen East Road connecting with San Tin Highway;
- b) Eastern Connection Road (ECR) (subject to further study and EIA approval); and
- c) Direct Link to MTR Lok Ma Chau Station (subject to detailed design).

8. The transport and traffic impact assessment under the LMCL P&E Study has taken into account the traffic generated from the Original Scenario of the Lok Ma Chau Loop development as well as some low-density commercial developments along Lok Ma Chau Road (in support of the Lok Ma Chau Loop development for assessment purpose and subject to detailed planning). A 2-tier transport modelling approach has been adopted for traffic forecast purposes. Both strategic and local transport models have been developed to provide quantitative input for the road capacity analysis of the major highway corridors and local roads.

9. The model runs in the LMCL P&E Study have demonstrated that the overall performance of the road network in the vicinity is acceptable in the design year 2031 with the Lok Ma Chau Loop development in place, as well as other assumed potential developments along Lok Ma Chau Road. With the proposed improvement schemes for Ha Wan Tsuen Road and Lok Ma Chau Road in place, the WCR will be able to handle the additional traffic generated by the phase one development of Lok Ma Chau Loop. It is, however, anticipated that the capacity of the WCR alone will not be able to handle the traffic generated by the Lok Ma Chau Loop during the full occupation stage. The ECR in the north-eastern part and for connection to the Kwu Tung North New Development Area (KTN NDA) will be required to serve the Lok Ma Chau Loop upon full development. Furthermore, the traffic model has demonstrated that the proposed direct slip road linkages between the Lok Ma Chau Road and Fanling / San Tin Highway (forming part of the WCR) could serve its function of alleviating the traffic conditions along the aforesaid highways and Castle Peak Road. All the key highway linkages and road junctions within the area of influence (AOI) and inside the Lok Ma Chau Loop have been assessed and are found to be operating satisfactorily.

10. The transport and traffic impact assessment in the LMCL P&E Study has also demonstrated the transport and traffic conditions under various testing scenarios on the Direct Link with MTR Lok Ma Chau Station, the scenario without the proposed Northern Link, and the possibility of a direct pedestrian linkage between the Lok Ma Chau Loop and

Shenzhen. The results of the testing scenarios have shown that the transport infrastructure as planned could cater for the variations in transport demands under the different conditions. Public transport strategy has also been presented and analysed in the report, providing adequate public transport services both within the Lok Ma Chau Loop and for accessing the external areas.

11. In the LMCL P&E Study, the traffic impact during the construction stage has been analysed. Various options of the construction haul-route during site-formation stage and the typical Temporary Traffic Management scheme for roadwork construction have also been proposed.

12. For internal road system, in considering the relatively small scale of the overall development area, a simple road hierarchy system consisting of the main road D1 and local roads L1 & L2 have been proposed, which would adequately serve the vehicular accessibility needs for the whole development. As successfully implemented at various urban locations in Hong Kong, traffic management measures will be imposed on the local roads such as low emission zone control, etc., in order to reduce road transport emissions and promote walking within Lok Ma Chau Loop in achieving a low carbon economy.

13. In view of the nature of the uses, the major source of external road traffic is generated by the students and employment population (non-residents). For the Baseline Scenario, although there is a shift in the proportion of



development mix from higher education to R&D/C&C uses, the estimated non-residents (i.e. student and employment population of the Lok Ma Chau Loop) would still be 41,370. It is anticipated that there would be no additional traffic flow induced for external connection roads.

14. For the internal road network, a slight reduction in internal road traffic is anticipated due to the reduction in total estimated population inside and outside the Lok Ma Chau Loop, which is beneficial to the performance of internal road network.

#### ***Drainage Impact Assessment (DIA)***

15. The DIA assessed the potential drainage impacts due to the Lok Ma Chau Loop development. A baseline drainage condition for the DIA is determined with following assumptions:

- ✧ adoption of planned 2011 land use scenario in Shenzhen River Basin MIKE11 model; and
- ✧ modification of the MIKE11 model by incorporating proposed land use changes at Lok Ma Chau Loop development.

16. The DIA is divided into regional and local drainage impact assessment. The regional DIA aims to assess changes in flood levels in existing drainage systems upstream and downstream of the Lok Ma Chau Loop development due to land use changes after the development especially with regard to flooding along the Shenzhen River. The local DIA focuses on

examining any disruption to existing drainage facilities due to the Lok Ma Chau Loop development and providing a scheme design of drainage systems for the Lok Ma Chau Loop development for flood protection.

17. Any increase in flood level in existing drainage systems upstream and downstream of the proposed Lok Ma Chau Loop development is predicted under various design return periods after the development. There is no impact on the 50 years water level on the Shenzhen River due to the proposed development.

18. In addition, hydraulic simulations were also carried out to assess the impact on the Old Shenzhen River Meander due to proposed site formation works. Under the existing condition, storm flow from development site will be discharged to Old Shenzhen River Meander, whereas after development most of the storm flow will directly be discharged to the Shenzhen River and therefore no impact on the Old Shenzhen River Meander.

19. The proposed ECR, WCR and Direct Link to MTR Lok Ma Chau Station will have minor increase in storm runoff as a result of change in land use in the form of road pavement but peak discharge would be attenuated through storage provided through manholes. Furthermore, construction of proposed ECR and WCR across Old Shenzhen River Meander will be carried out in dry season to minimise any impact or need for diversion works.

20. DIA was carried out in the LMCL P&E Study by

assessing the drainage impacts arising from changes to drainage characteristics due to implementation of the proposed Lok Ma Chau Loop development. As there are no further changes in drainage characteristics of future land use due to the shift in development mix, it is anticipated that there will be no additional drainage impacts, subject to the implementation of the proposed drainage systems to convey the storm runoff from the Area to the Shenzhen River, and with the Ecological Area serving as a flood retention pond.

### ***Sewerage and Sewage Treatment Implications Assessment***

21. The Lok Ma Chau Loop is currently not supported by any sewage treatment facility. The sewerage impact assessment (SIA) assessed the need to provide sewerage infrastructure to support the proposed developments on based on the RODP. There is no public sewerage within and in the vicinity of the Lok Ma Chau Loop. A new sewage treatment works (STW) and associated sewerage network is required to serve the Lok Ma Chau Loop development.

22. The SIA recommended the on-site STW option. A site of 2.1ha is reserved for the provision of an on-site STW with a capacity of 18,000m<sup>3</sup>/day. Membrane Bioreactor (MBR) is recommended as the sewage treatment process to be adopted in the proposed Lok Ma Chau Loop STW, which requires smaller footprint and generates effluent quality readily for treated sewage effluent (TSE) reuse purpose. Off-site measures will also be required to offset the residual pollution load from the

STW effluent in order to meet the requirement of ‘no net increase in pollution load to Deep Bay’.

23. As the daily sewage volume from the Lok Ma Chau Loop development under the Baseline Scenario would be lower than the design capacity of the proposed Lok Ma Chau Loop STW, it is anticipated that there will be no adverse sewerage impact due to the shift in development mix.

### ***Water Supply Impact Assessment***

24. The Lok Ma Chau Loop development will generate large demands for fresh, flushing, District Cooling System (DCS), water features and irrigation water supply. A new water supply system has been planned to meet such demands and the corresponding implementation programme are assessed. New development within Sheung Shui and Fanling area in the vicinity of the Study Area are also assessed to check the adequacy of existing and for the planning of water infrastructure works.

25. The total water demand estimate for Lok Ma Chau Loop development is approximately 18.68 million litres/day (MLD), including 9.04 MLD potable water demand and 9.64 MLD for non-potable water demand. Since the existing watermains along Lok Ma Chau Road do not have enough capacity to feed the additional water demand arising from the Lok Ma Chau Loop development, a new water supply system shall be provided for both fresh and flushing water. In order to meet water demand due to first population intake at Lok Ma Chau Loop development

site, proposed Kwu Tung North Fresh Water Service Reservoir (KTN FWSR) and associated trunk main and distribution main under NENT NDAs Study are recommended to be implemented under LMCL P&E Study. Treated Sewage Effluent (TSE) for non-potable uses including flushing, cooling, water features and irrigation are recommended as it is the most cost-effective solution. A site to the south of Lok Ma Chau Loop has been reserved for the new Flushing Water Service Reservoir (FLWSR), which will be subject to approval by the Town Planning Board, for pumping TSE from on-site STW to FLWSR in ultimate scenario.

26. As the shift in development mix of the three main uses, which does not lead to increase in total GFA, is irrelevant to the planning of infrastructures and public facilities, the effect to water demands for flushing, water features and irrigation water is negligible.

27. For fresh water demand, the estimation is based on the unit water demand at different development zones. According to the LMCL P&E Study, the unit water demand (both potable and non-potable) of residential population is comparatively much higher than non-residential population. The unit water demand for student and employment populations (not residing in the Lok Ma Chau Loop) are the same. With the proposed shift in the development mix, i.e. increase of R&D but decrease in higher education, there would be a reduction in residential and total population, the total water demand is expected to be reduced.

28. Under the Baseline Scenario, since more GFAs are allocated for R&D/C&C use, the water demand for DCS is anticipated to be increased. However, such increase would possibly be off-set by the reduced fresh water demand as mentioned above. As a result, there will be no adverse impact on the planned capacity of the proposed FWSR.

#### ***Site Formation (SF) Assessment***

29. The principle adopted for the site formation pertinent to the Lok Ma Chau Loop and supporting infrastructure near the Lok Ma Chau Loop, including the WCR, ECR and other infrastructures, is to minimise site formation works by keeping all the proposed developments and infrastructures as close to the existing ground profile as possible.

30. The proposed site formation levels would be taken as +4mPD to +6mPD for Area A and +4mPD and +15mPD for Area B. The geotechnical, environmental, ecological, traffic and drainage constraints to the site formation works of Lok Ma Chau Loop development are presented in the SF assessment. Corresponding solutions to the constraints have been identified. The proposed developments in the RODP are considered to be feasible. The SF assessment will be investigated further and refined in the detailed engineering design stage when more detailed site investigation results are available and development schemes are fine-tuned.

31. The proposed shift in development mix, confined within

the Lok Ma Chau Loop boundaries, will not change the original circumstances in the LMC Loop P&E Study. The findings and recommendations of the SF assessment should be adopted in the detailed implementation of the IT Park.

### ***Sustainability Assessment (SA)***

32. Endowed with the vision to developing the Lok Ma Chau Loop as a sustainable, environmentally friendly, energy efficient and people-orientated community, the proposed development including the supporting infrastructure outside the Lok Ma Chau Loop have taken into account economic, social and environmental sustainability in their preparation. The results of the SA indicate that the Lok Ma Chau Loop development would bring about improvement in the economy and industry development, education, leisure and cultural vibrancy, and social and infrastructure facilities. These benefits come in the form of positive economic return, increased capital investment, improvement in urban living space and facilitation of exchange among “Production, Education and Research”. Also, the associated transport infrastructure would improve connectivity between the Lok Ma Chau Loop area and its periphery regions to the rest of Hong Kong.

33. On the other hand, the Lok Ma Chau Loop development may bring about degradation to the natural environment, leading to loss of natural resources. The main impacts are increase in waste and air pollutants, as well as the alteration of existing landscape features including existing trees and vegetation,

embankments and vegetated slopes, etc. The land use proposal and overall development have avoided these adverse impacts and enhanced the positive impacts with appropriate mitigation measures, so as to ensure that the Lok Ma Chau Loop development will be a sustainable, environmentally-friendly, energy-saving and people-oriented community.

34. The development of Lok Ma Chau Loop being composed of higher education, high-tech R&D and C&C remains unchanged after the shift of development mix. Also, there is no change to the planned infrastructure inside and outside the Lok Ma Chau Loop. Overall, the Lok Ma Chau Loop development will bring about positive impacts in terms of sustainability development.

### ***Environmental Aspect***

35. The LMCL P&E Study is a Designated Project (DP) under Item 1 Schedule 3 of EIA Ordinance (engineering feasibility study of urban development projects with a study area covering more than 20 ha or involving a total population of more than 100,000). In addition, a number of the project components associated with the Lok Ma Chau Loop development also fall under various Schedule 2 designated project categories.

36. The EIA in the LMCL P&E study was conducted in accordance with EIA Study Brief No. ESB-238/2011, following the guidelines on assessment methodologies in the Technical Memorandum on EIA Ordinance (TM-EIAO). Cumulative



impacts with other concurrent projects have been taken into account in the assessment.

37. The EIA process for the Lok Ma Chau Loop development (the Project) has been completed. The EIA report for the Project was approved with conditions on 25 October 2013. One of the EIA report approval conditions is to exclude the proposed ECR from the EIA report. The Environmental Permit (EP) for the Project was obtained on 22 November 2013. The findings and recommendations of the EIA serve as inputs to various stages of the LMCL P&E Study.

38. One of the recommendations of the Advisory Council on the Environment is to consider integrating the conserved reedbed area in the overall Amenity/Activity Corridor design. As such, the recommendations would be considered as part of the detailed landscape design, to be undertaken in the detailed design stage of the Project.

39. The environmental acceptability of the ECR is to be further studied and determined in future in another EIA study.

#### Air Quality

40. An air quality impact assessment has been conducted to evaluate the air quality impact of the Original Scenario and the associated infrastructure. It is concluded that the air quality impacts during both construction and operation phases would be acceptable after the implementation of the mitigation measures

as recommended in the EIA.

41. Whilst the bio-remediation along the section (about 4.2 km long) of Shenzhen River is proposed, short-term residual odour impact has been predicted at the external spaces of the Lok Ma Chau Loop development, while residual odour impact inside all internal spaces with central air conditioning can be mitigated to achieve odour criterion by installation of odour removal system as interim measure. In the long term, with continuous improvement of Shenzhen River, the residual odour impact would be further reduced resulting in odour criterion being achieved.

42. As there are no additional infrastructures (i.e. sewage treatment works, DCS, etc.) nor additional air emission sources (i.e. chimney, genset, etc.) expected in the shift in development mix, there will be no new pollution source. While air quality is associated with the estimated traffic flow, with no increase in number of non-residential (mobile) population, the air quality implications arising from the Lok Ma Chau Loop development are expected not worse than the original development scenario.

#### Noise

43. Potential noise impacts which may arise during the construction and operation phases have been assessed. Construction noise associated with the use of Powered Mechanical Equipment (PME) and construction vehicle accessing Lok Ma Chau Loop for advance works and site

formation have been assessed. Operational noise impacts associated with fixed noise sources and road traffic noise have also been investigated.

44. Results indicate that with the implementation of good site practices and associated mitigation measures, the noise impacts during construction and operation phases would be controlled within the relevant noise criteria.

45. There will be no new noise sources (i.e. PME, genset, etc.) expected in the shift in development mix and no change to the key assumptions in the approved EIA report. With no increase in number of non-residential population, there will be no additional traffic noise generated inside and outside the Lok Ma Chau Loop. As a result, the noise implications arising from the Lok Ma Chau Loop development during construction and operation stages are expected not going to be worse than the Original Scenario.

#### Water Quality

46. During construction phase, potential water quality impacts would arise from construction runoff, groundwater from contaminated area, sewage from workforce, riverbanks formation for the Ecological Area, construction of bridge crossing under WCR, underpass / depressed road works and Direct Link to MTR Lok Ma Chau Station as well as the bio-remediation of Shenzhen River. Control measures such as silt traps and oil interceptors will be implemented on-site to control

the potential surface runoff. Good site practice as stipulated in the Practice for Professional Persons on Construction Site Drainage, EPD, 1994 (ProPECC PN 1/94) should be followed. Cofferdam/diaphragm wall will be employed to prevent disturbance to waterbodies during the construction of bridge pier and cut-and-cover underpass. Regular water quality monitoring in the Old Shenzhen River Meander has been recommended.

47. All sewage arising from the Lok Ma Chau Loop development will be collected and treated by the proposed on-site STW. Off-site measures will be undertaken to offset the residual pollution load from the STW, thereby meeting the requirement of “no net increase in pollution load to Deep Bay”. Control measures like silt traps and oil interceptors will be implemented to control the potential surface runoff during operational phase as well.

48. With full implementation of the mitigation measures, no adverse residual and cumulative impacts are anticipated during both the construction and operational phase of the Project.

49. As far as construction works within the Lok Ma Chau Loop are concerned, water quality impacts during construction phase will be similar to the Original Scenario. During operation phase, as the daily sewage volume from the Lok Ma Chau Loop development under the Baseline Scenario would still be lower than the design capacity of the proposed Lok Ma Chau Loop STW, there will be no adverse water quality impact due to the shift in development mix.

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Waste Management

50. Potential implications from the generation of waste during the construction phase have been evaluated. Measures, including the opportunity for on-site sorting, reusing excavated fill materials etc., are devised in the construction methodology to minimise the surplus materials to be disposed. Recommendations have been made for implementation by the contractor during the construction period to minimise waste generation and off-site disposal. The disposal quantities for construction and demolition (C&D) materials and their disposal methods have also been assessed.

51. It is estimated that a total of 1,391,900m<sup>3</sup> of inert materials would be generated from the Project. 976,700m<sup>3</sup> of the generated inert materials would be reused on-site and the remaining would be disposed of in Public Fill Reception Facilities. On the other hand, a total of 271,500m<sup>3</sup> non-inert materials would also be generated. 247,500m<sup>3</sup> of the generated non-inert material (i.e. non-inert swamp deposit) would be re-used on-site and in the concurrent projects such as NENT NDAs, and the remaining would be disposed of in landfill.

52. Besides, a total of 64,000m<sup>3</sup> of sediment would be generated during the construction of the WCR and ECR. All sediment would be reused on-site and in the concurrent projects such as NENT NDAs.

53. The types of waste that would be generated during the operational phase have been assessed. Recommendations have been made to ensure proper treatment and disposal of these wastes. It is estimated that Lok Ma Chau Loop at full operation stage would recycle 14,396 tonnes per annum (tpa) out of 24,954 tpa of municipal solid waste (MSW), leaving 10,558 tpa of MSW that would need disposal to landfill.

54. With the implementation of recommended mitigation measures for the handling, transportation and disposal of the identified waste, adverse residual waste management implications are not anticipated for both the construction and operational phases.

55. The proposed shift in development mix, confined within the Lok Ma Chau Loop boundaries, will lead to waste generation similar to the original circumstances in the approved EIA report during construction phase.

56. In operation phase, with reduction in overall population, waste generated by general activities will be reduced accordingly. For increase in population in R&D/C&C, the additional amount of chemical waste generated will be recycled by licensed facility and/or disposed of to Chemical Waste Treatment Centre.

57. As a result, adverse residual waste management implications are not anticipated for both the construction and operation phases.

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### Land Contamination

58. Land contamination assessment has been carried out, which includes review of historic information and aerial photos, site appraisal, and site investigation for soil and groundwater sampling and testing in Lok Ma Chau Loop, etc. Five zones within Lok Ma Chau Loop are identified as contaminated and remediation by solidification/stabilization is recommended. Re-appraisal on the Lok Ma Chau Loop and the entire contamination assessment area for the associated infrastructure outside Lok Ma Chau Loop would be required prior to commencement of the works for the development.

59. As land contamination impacts may only arise during the construction phase, the shift in development mix which may only affect land use will not induce additional impacts.

### Cultural Heritage

60. The desktop review and field surveys of cultural heritage (archaeological heritage, built heritage and declared monument) within the 300m assessment area suggest that impacts from the Project are negligible.

61. The only potential impacts from the Lok Ma Chau Loop development are the indirect visual impact on the built heritages near Lok Ma Chau Loop and WCR from its surrounding development but it can be mitigated by landscaping and greening measures and providing screen planting. As far as construction

works within the Lok Ma Chau Loop are concerned, the shift in development mix will not lead to additional impact to cultural heritage assessed in the approved EIA report.

### Ecology

62. The ecological impact assessment covers the direct and indirect impacts likely to be caused by development of Lok Ma Chau Loop on habitats, species, those arising from fragmentation, those from disturbance and, finally, the potential cumulative impacts during the construction and operational phases.

63. Construction and operation of development associated with the Project will result in a range of ecological impacts some of which, if unmitigated, are predicted to cause ecological impact of high significance.

64. With the implementation of practical mitigation measures, ecological impacts can be reduced to low levels. On the basis of these impacts of low severity, the Project is considered acceptable in terms of ecological impact.

65. Although there is a shift in the proportion of respective uses, the ecological attributes and mitigation measures identified in the approved EIA report and the EPs would be adopted accordingly. These include the provision of Ecological Area and associated 50m-wide buffer zone along the southeastern portion and the incorporation of a stepped building height profile to minimise impacts on the birds' flight line corridor, etc. In view



of these, the proposed shift in development mix would not result in additional ecological impacts.

#### Fisheries

66. Since the pond areas to be lost do not account for a significant proportion of the total fishpond area in Hong Kong, the fisheries impact is considered to be of low significance. In general, with the current alignment selected for external connections, and good site practices implemented to minimize dust, water quality and waste impacts, no unacceptable direct and indirect impacts on fisheries from the construction activities and operation of the proposed development and infrastructure are anticipated. The proposed shift in development mix, confined within the Lok Ma Chau Loop, will not lead to additional impact to fisheries.

#### Environmental Monitoring and Audit

67. In accordance with the recommendations of the EIA report, it is necessary to conduct the Environmental Monitoring and Audit (EM&A) programme during the construction, operation, restoration and aftercare phases of the Project. The EM&A requirements include determining short- and long-term environmental impacts, indicating any failing environmental control measures or other operation practices, determining the effectiveness of any mitigation or control measures, provision of data for environmental audit, and assessing the compliance with the environmental and pollution control and operation

requirements. The recommended EM&A programme is applicable in spite of the shift in development mix.

68. An EM&A programme will be implemented throughout the entire construction period to regularly monitor the environmental impacts on the neighbouring sensitive receivers. Any action required during the operational phase has also been recommended for implementation.

69. The EM&A programme would include site inspection / audit and monitoring for construction dust, odour, construction airborne noise, operation airborne noise, water quality, ecology and updating changes as necessary. Details of the recommended mitigation measures, monitoring procedures and locations are presented in the EM&A Manual.

#### ***Air Ventilation Assessment***

70. An Air Ventilation Assessment (AVA) has been carried out under the LMCL P&E Study. The annual prevailing wind of the Lok Ma Chau Loop comes from the east-northeast direction, while the summer prevailing wind comes from the southwest direction. Taken into account the findings of the AVA, three breezeways and one localized air path aligned with the direction of the annual and summer prevailing winds have been identified within the Lok Ma Chau Loop in order to facilitate wind penetration across the area. Other features such as the Ecological Area in the southeast, the open space lining the Shenzhen River and part of the Old Shenzhen River Meander, as

well as the Amenity/Activity Corridors that run in a northwest-southeast direction, would also provide adequate widths and setbacks to allow wind penetration through the Lok Ma Chau Loop and to its surrounding areas. In addition, two wind enhancement features including reduction of podium coverage and separation of bulky buildings should be adopted to enhance the wind performance of the development. Other design controls on wind enhancement including building height restriction, site and podium coverage, active frontage design and designation of NBA could further enhance wind environment at street level.

71. The AVA has demonstrated that the proposed development based on a recommended layout plan (RLP) with appropriate wind enhancement measures would not have adverse impact on air ventilation of the Lok Ma Chau Loop and its surrounding areas. If a change in development mix result in a different development layout and design which leads to the specific AVA mitigation measures (i.e. building height restriction, site and podium coverage, active frontage design along the breezeway at Pedestrian Boulevard, designation of NBAs and two wind entrances at both ends of the breezeway at Pedestrian Boulevard cannot be provided, further AVA study should be conducted to ensure acceptability of the design for its air ventilation environment and ensure that its air ventilation performance would not be worse than that of the design under the LMCL P&E Study. The detailed building design is suggested to incorporate those wind enhancement features suggested in the Hong Kong Planning Standards and Guidelines

(HKPSG) and to comply with the Sustainable Building Design Guideline (PNAP APP-152) in the future development to further enhance the wind performance to its surrounding area.

### ***Urban Design and Visual***

72. The Lok Ma Chau Loop consists of undeveloped land and is generally a flat, low-lying area covered by shrubs, weeds and trees. It is bounded by the Shenzhen River along its northwestern end and the Old Shenzhen River Meander along its remaining sides. In terms of the building form and height, the Lok Ma Chau Loop is embedded in an undeveloped area and surrounded by wetlands, farmlands and villages. Under the LMCL P&E Study, urban design principles, concepts and framework have been devised as follows :

- ✧ The concept of “urban to rural transition”, which is symbolised by the development clusters in Shenzhen growing south of the Shenzhen River to meet the green linkages in the Lok Ma Chau Loop development in Hong Kong, represents the merging of the urban and rural environment of the two cities.
- ✧ A low-rise building height profile with building heights descending from the core areas towards the Shenzhen River and the Ecological Area/Old Shenzhen River Meander to respond to the natural settings in the peripheral areas and attain a gradual and smooth transition to the rural Hong Kong backdrop is proposed.

- ✧ Two gateways in form of prominent landmark towers at the southwest and northwest of the Lok Ma Chau Loop supported by transport interchanges are proposed.
- ✧ Open view to be created with provision of visual corridors and wind/activity corridors in the form of road, sizeable land parcels and designated open space in order to respect the visual attributes, such as hill backdrop, fishponds and rural village settings in the surrounding area.

73. Notwithstanding that there would be a shift in development mix, the boundary and location of development site and key development parameters including total GFA and proposed building height would be the same. The above urban design concepts/features should be adhered to if there is any revision on the layout of the development in the future.

### ***Landscape Aspect***

74. The Lok Ma Chau Loop currently consists of a combination of reedbed and grassland. It is important that some of these features be retained, wherever possible, from both ecology and landscape enhancement perspectives. The surrounding landscape context is characterised by the flat agricultural plain and fishponds of the Shenzhen River valley bisected by the engineered course of the Shenzhen River and the backdrop of the vegetated ridges at Lok Ma Chau and Tai Shek

Mo. Under the LMCL P&E Study, a Recommended Master Landscape Plan has been prepared which demonstrates the integration of amenity areas and the cohesive quality of the landscape framework which serves together the visually disparate elements of the built environment. Key landscape design features recommended include:

- ✧ Pedestrian Boulevard - a northeast-southwest axis connecting the key development clusters serves as the prime activity corridor of the Lok Ma Chau Loop with a design intent to encourage people to congregate and enhance greenery.
- ✧ Ribbon Park - located at the central part of the Lok Ma Chau Loop bisecting the Pedestrian Promenade on a northwest-southeast axis which creates a natural interval between development clusters.
- ✧ Ecological Area - located along the southeastern boundary of the Lok Ma Chau Loop, designed with the aim to enhance and create areas of compensatory reed beds as well as providing a corridor connecting ecologically important areas to the east and west of the Lok Ma Chau Loop. The location of Ecological Area would preserve the existing birds' flight path as well as integrate with the surrounding river courses and fish ponds to optimize its function and value.
- ✧ Retention of Reedbed - part of the existing reedbed

will be preserved in-situ and forms a major ecological and landscape resource for the future development in the Lok Ma Chau Loop.

- ✧ Buffer Zone - adjoining the Ecological Area is a 50m-wide buffer zone designated for low-density and low-rise buildings to avoid disturbance to the ecology of the adjacent areas.
- ✧ Other landscape design features including Riverside Promenade Zone, Parkway Corridor and Tree Avenue

75. Given that the proposed shift of development mix will not involve additional change to the landscape character and resources as per the LMCL P&E Study and the approved EIA Report, the findings and recommendations of the LMCL P&E Study and the approved EIA report are still valid.

76. The above landscape design features should be retained if there is any revision to the layout of the development in the future. The open space provision should be designed in accordance with the guidelines concerning the level of provision of open space and the requirements for recreational facilities in the HKPSG. Development plots shall achieve a greening ratio of at least 30% to help reduce the heat island effect and to provide a comfortable pedestrian environment. All landscape works shall be designed in accordance with relevant guidelines to the satisfaction of the relevant management and maintenance authorities.

### **Conclusion**

77. As set out in the above technical review, the proposed shift in the development mix would be supported by the planned infrastructure facilities. The proposed development would not have adverse impacts from traffic, environmental, drainage, sewerage, urban design and landscape aspects. Irrespective of the proposed increase of R&D/C&C uses, and corresponding decrease of higher education facilities, the ecological and environmental mitigation measures identified in the approved EIA and EPs would be adopted at the construction and operation stages of the Loop development.

### **Attachment**

Table 1 – Scenarios of Different Development Mix

**PLANNING DEPARTMENT  
CIVIL ENGINEERING AND DEVELOPMENT  
DEPARTMENT  
MAY 2017**



**Scenarios of Different Development Mix**

	Development Mix		Education (Population)		R&D/C&C (Population)	Total Population <sup>@</sup>
	Education GFA (m <sup>2</sup> )	R&D/C&C GFA (m <sup>2</sup> )	Student	Employment		
<b>Original Scenario (under LMCL P&amp;E Study)<sup>^</sup></b>	720,000 (64%)	411,000 (36%)	24,000	6,000	20,550	53,370
<b>Baseline Scenario<sup>^</sup></b>	339,300 (30%)	791,700 (70%)	11,310	2,830	33,690	50,650

<sup>^</sup> Original Scenario: A worker density of 20m<sup>2</sup> per worker has been adopted for R&D / C&C uses.

Baseline Scenario: The planned population density (i.e. 23.5m<sup>2</sup> per worker) for the Science Park in Pak Shek Kok has been adopted for the R&D/C&C uses.

<sup>@</sup> Total population of all scenarios includes 1,126 for hotel use, 1,544 for commercial uses and 150 for government use.

**Proposed Additions to, Deletions/Deviations from Master Schedule of Notes for  
incorporation into the draft Lok Ma Chau Loop OZP No. S/LMCL/E**

<b>Zoning</b>	<b>Proposed Additions /Deviations</b>	<b>Justifications</b>
“C”	<u>Deviation:</u> Planning Intention – “This zone is intended primarily for commercial developments, which may include uses such as office, shop, services, place of entertainment, eating place and hotel, functioning <i>mainly</i> as <del>territorial-business/financial centre(s) an regional or district</del> commercial/shopping centre(s) <i>serving the needs of the Lok Ma Chau Loop</i> .— <del>These areas are usually major employment nodes.”</del>	The planning intention has been slightly modified in respect of the context of Lok Ma Chau Loop development.
“G/IC”	<u>Deviation:</u> - ‘Utility Installation for Private Project’ is moved from Column 2 to Column 1.  - Planning Intention – “This zone is intended primarily for the provision of Government, institution or community facilities serving the needs of the <del>local residents</del> <i>Lok Ma Chau Loop</i> and/or a wider district, region or the territory. It is also intended to provide land for uses directly related to or in support of the work of the Government, organizations providing social services to meet community needs, and other institutional establishments.”	- To cater for the need to develop the district cooling system by the private sector, if necessary.  - The planning intention has been slightly modified in respect of the context of Lok Ma Chau Loop development.
“O”	<u>Addition:</u> - ‘Public Vehicle Park (excluding	- To allow parking of cycles in

Zoning	Proposed Additions /Deviations	Justifications
	<p>container vehicle) (for cycles and underground vehicle park only)’ in Column 1</p> <p><u>Deviation:</u></p> <ul style="list-style-type: none"> <li>- ‘Public Vehicle Park (excluding container vehicle) (<i>not elsewhere specified</i>)’ in Column 2</li> <li>- Planning Intention – “This zone is intended primarily for the provision of outdoor open-air public space for active and/or passive recreational uses serving the needs of the <del>local residents</del> <b>Lok Ma Chau Loop</b> as well as the general public.”</li> </ul>	<p>designated areas in the “O” zone in order to facilitate/promote cycling activity in the Lok Ma Chau Loop, and to cater for the possible use of the underground space of the “O” sites for parking of vehicles (excluding container vehicle).</p> <ul style="list-style-type: none"> <li>- Same as above.</li> <li>- The planning intention has been slighted modified in respect of the context of Lok Ma Chau Loop development.</li> </ul>
“CA”	<p><u>Addition:</u></p> <ul style="list-style-type: none"> <li>- ‘Pier’ in Column 2</li> </ul> <p><u>Deletion:</u></p> <ul style="list-style-type: none"> <li>- ‘On-Farm Domestic Structure’ in Column 1</li> <li>- ‘House (Redevelopment only)’ in Column 2</li> <li>- ‘Government Refuse Collection Point’ in Column 2</li> </ul>	<ul style="list-style-type: none"> <li>- To allow flexibility for possible provision of pier(s) at the meander section of the Old Shenzhen River.</li> <li>- The meander section of the Old Shenzhen River is not intended for agricultural activity.</li> <li>- The use is not applicable since there is no existing house at the meander section of the Old Shenzhen River.</li> <li>- The meander section of the Old Shenzhen River is not intended for the provision of this GIC facility.</li> </ul>

Zoning	Proposed Additions /Deviations	Justifications
	<p><u>Deviation:</u></p> <ul style="list-style-type: none"> <li>- ‘Nature Trail’ is moved from Column 2 to Column 1</li> <li>- Planning Intention – <del>“The planning intention of this zone is to conserve the ecological value of wetland and fish ponds which form an integral part of the wetland ecosystem. The “no net loss in wetland” principle is adopted for any change in use within this zone. The primary intention is to discourage new development unless it is required to support the conservation of the ecological integrity of the wetland ecosystem or the development is an essential infrastructure project with overriding public interest. This zone is intended to protect and retain the existing natural landscape and ecological features of the Old Shenzhen River Meander and the associated riparian vegetation, which forms an important element of the flight line corridor for birds and is used by the Eurasian Otter, for conservation, educational and research purposes, and to separate sensitive natural environment from the adverse effects of development. There is a general presumption against development in this zone. In general, only developments that are needed to support the conservation of the ecological integrity of the</del></li> </ul>	<ul style="list-style-type: none"> <li>- To allow flexibility for possible provision of nature trail(s) at the meander section of the Old Shenzhen River.</li> <li>- The planning intention has been modified in respect of the context of Lok Ma Chau Loop development and taking into account the comments of the DAFC.</li> </ul>



Zoning	Proposed Additions /Deviations	Justifications
	<p><i>wetland ecosystem or the existing natural landscape or scenic quality of the Old Shenzhen River Meander or are essential infrastructure projects with overriding public interest may be permitted.”</i></p> <p>- Remarks – <del>“No redevelopment, including alteration and/or modification, of an existing house shall result in a total redevelopment in excess of the plot ratio, site coverage and height of the house which was in existence on the date of the first publication in the Gazette of the notice of the interim/draft development permission area plan.”</del></p> <p>- Remarks – “Any <b><i>diversion of stream</i></b>, filling of land/pond or excavation of land, including that to effect a change of use to any of those specified in Columns 1 and 2 above or the uses or developments always permitted under the covering Notes, shall not be undertaken or continued on or after the date of the first publication in the Gazette of the notices of the <del>interim/draft development permission area plan</del> <b><i>draft Lok Ma Chau Loop Outline Zoning Plan No. S/LMCL/I</i></b> without the permission from the Town Planning Board under section 16 of the Town Planning Ordinance.”</p>	<p>- The remark is not applicable since there is no existing house at the meander section of the Old Shenzhen River.</p> <p>- As the land use zone mainly covers the meander section of the Old Shenzhen River, the remark has been modified to impose development control on diversion of stream activity.</p>