WORKING PAPER NO. 32
DEVELOPMENT POTENTIAL OF FRONTIER CLOSED AREA

Purpose

1 In the context of HK2030 Study, there have been proposals to develop the Frontier Closed Area (FCA)\(^1\) and this report summarizes HK2030 Study’s findings on the following:-

(a) assessment of the development potential of the FCA and identification of potential development areas; and

(b) formulation of possible land uses for the potential development areas.

Overview Of Existing FCA

The Area

2 The existing FCA with a total coverage of about 28 km\(^2\) spans from the Starling Inlet in the east to the Deep Bay in the west (Plan 1). The area is mainly rural in nature and comprises mostly wetland, green belt area, hilly terrain and scattered pockets of flat land and village settlements. Subject to detailed land use survey, the existing characteristics and land uses of the FCA can be broadly categorised as follows (Plan 2):-

<table>
<thead>
<tr>
<th>Category</th>
<th>Area (km(^2))</th>
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<tbody>
<tr>
<td>(a) Agricultural and flat land</td>
<td>8</td>
</tr>
<tr>
<td>(b) Wetland</td>
<td>7.1</td>
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<tr>
<td>(c) Hilly terrain</td>
<td>10</td>
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<tr>
<td>(d) Village settlements and cemetery</td>
<td>2.5</td>
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<tr>
<td>(e) Control points</td>
<td>0.4</td>
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Total: 28 km\(^2\)

1 Apart from the views expressed by the media, FCA development has been brought up for discussion at a public forum on 26.1.02 and two Focus Group meetings on 16.2.02 and 23.3.02 organised by PlanD during the HK2030 Stage 2 public consultation. Views on FCA development have been summed up in the Stage 2 Public Consultation Report which is
The Setting

3 The FCA covers the northern part of the New Territories along the boundary. There are contrasting developments on both sides of the boundary. On the Mainland side, Shenzhen has been developed from a small town into a bustling major city with a total population of about 7 million\(^2\). Shenzhen’s Futian and Lo Wu (Luohu) districts adjoining the boundary are important growth centres of the city, with high-rise and massive buildings. On the Hong Kong side, the FCA and its adjacent area are rural in nature. The total population of the FCA is about 9,500, of which about 4,000 are living in the major built-up area at Sha Tau Kok rural town. The nearest new town Sheung Shui/Fanling is about 6 km away. The existing and planned land uses of the surrounding areas of the FCA are detailed in paras. 14 and 15 below.

Environment and Ecology

4 Given the restricted access under the existing FCA policy, a large part of the FCA largely remains unspoiled. Taking account of the existing information, the following paragraphs highlight some major environmental and ecological issues pertaining to the FCA:-

**Mai Po to Lo Wu (Plan 3):**

(a) The western part of the FCA consists mainly of fishponds and is in close proximity to the Mai Po Inner Deep Bay Ramsar Site, i.e. a “Wetland of International Importance” listed according to the “Convention on Wetland of International Importance especially as Waterfowl Habitat” (Ramsar Convention). The above Ramsar Site, listed in September 1995, includes the Inner Deep Bay, the Mai Po Marshes Nature Reserve and certain surrounding fish ponds. Such a designation recognizes the ecological importance of the Inner Deep Bay area as a wetland habitat and refueling station for thousands of migratory birds. Upon reunification in July 1997, the Ramsar Convention continues to apply to the Hong Kong Special Administrative Region as China, being a contracting party, has made the formal recognition of the Mai Po Inner Deep Bay Ramsar Site as her 7\(^{th}\) Ramsar Site. Under the Ramsar Convention, if a contracting party in its urgent national interest subsequently deletes or restricts a “Wetland of International Importance”, it should as far as possible compensate for any loss of wetland resources and recreate additional nature reserves for waterfowl and for the protection.

(b) To protect the Mai Po Inner Deep Bay Ramsar Site from adverse impacts of development and to maintain the ecological integrity of the Deep Bay wetland ecosystem available at HK2030 Study’s website.

\(^2\) Mainland National Census 2000
as a whole, the Town Planning Board (TPB) has designated the wetland west of the Lok Ma Chau (LMC) Loop as Wetland Conservation Area (WCA) and the area south of the Loop as Wetland Buffer Area (WBA) (Plan 3). To conserve the contiguous fish ponds in the area, new development would not be allowed within the WCA unless it is required to support the conservation of the ecological value of the area or the development is an essential infrastructure project with overriding public interest. Any such development should be supported by an ecological impact assessment (EcoIA) to demonstrate that the development would not result in a net loss in wetland functions and negative disturbance impacts.

(c) The intention of the WBA is to protect the ecological integrity of the fish ponds and wetland within the WCA and prevent development from having a negative off-site disturbance impact on the ecological value of fish ponds. Development proposals requiring planning permission from the TPB have to be supported by an EcoIA to demonstrate that their negative impacts could be mitigated without causing net increase in pollution load to the whole Deep Bay catchment.

(d) Area to the east of LMC Loop (Hoo Hok Wai) consists of fish ponds which form part of the Deep Bay wetland ecosystem. It has been identified as the WCA in the “Study on the Ecological Value of Fish Ponds in Deep Bay Area”. However, as the area falls outside the current statutory town plan, it has been excluded from the WCA stipulated under the current TPB guidelines.

(e) Within the FCA, a list of sites identified by the Agriculture, Fisheries and Conservation Department as having conservation value from an ecological point of view is at Annex 1.

Water Quality of Deep Bay and Mirs Bay

(f) A large part of the FCA is within the Deep Bay catchment with no existing nor planned trunk sewers. According to the Deep Bay Water Quality Regional Control Strategy Study (endorsed by the then HK-Guangdong Environmental Protection Liaison Group (EPLG)), the assimilative capacity of the Deep Bay had already been exceeded. An agreement was therefore reached at the 11th EPLG on 26.3.1999 to reduce the pollution load, on a step-by-step basis, of Deep Bay so as to work towards meeting the assimilative capacity over a period of approximately 15 years from 2000 to 2015. To protect the water quality and to meet the agreement with the Guangdong authorities, it is

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3 To avoid the irreversible adverse impacts on the fishponds and other wetland habitats in the Deep Bay Area, the TPB provides development guidance for the Deep Bay Area through statutory plans. To facilitate applications within the Deep Bay Area, TPB PG-No. 12A was published in 1994. The Guidelines was later revised in 1999 (retitled TPB PG-No. 12B) taking account of the findings of the “Study on the Ecological Value of Fish Ponds in the Deep Bay Area” completed in 1997.
of utmost importance to ensure no additional pollution load to the Deep Bay as a result of new development within the FCA.

(g) A minor eastern portion of the FCA is within the catchment area of Mirs Bay Water Control Zone. A set of water quality objectives was recommended in the Study on the Environmental Protection of Mirs Bay, Stage I Phase II report dated December 1997 to provide the criteria of water quality for impact assessment. Although the water quality within the Mirs Bay Water Control Zone in general is very good, there was a notable deterioration in the water quality of Starling Inlet in 2000, which suggested the area likely be subject to increasing pollution from sewage discharges. In brief, environmental impact assessment is indispensable to any developments within the FCA.

Highland to the east of Heung Yuen Wai (Plan 4):

(h) The area is largely hilly in topography with steep slope above 50m, except the Sha Tau Kok rural town. There is a Site of Special Scientific Interest (SSSI) in Lin Ma Hang, which is one of the most important bat colonies in Hong Kong. The freshwater stream in Lin Ma Hang is also an ecologically sensitive site. The hilly area to the west of Sha Tau Kok is Hung Fa Leng.

Land Ownership

5 About 28% of the land within the existing FCA are private lots, most of which are agricultural land. Intermixed with Government land, private lots are scattered over 21 recognized villages (Annex 2) within the FCA. Most of these private lots are flat land or fish ponds. Sizable pieces of Government land are mainly found in hilly areas such as Hung Fa Leng, Wong Mau Hang Shan and Sandy Ridge Cemetery as well as the fish ponds near Mai Po.

Infrastructure

Existing and Proposed Transportation Linkage of the FCA (Plan 5)

6 At present, access to the FCA is restricted. The existing road system within the FCA mainly comprises sub-standard roads intended to serve local villages. The present condition of almost all village roads is not suitable for opening to unrestricted public access from the safety point of view. Without substantial upgrading, the existing roads have very limited spare capacities and would not be suitable (e.g. due to the lack of proper street lighting and u-turning facilities) for supporting new developments and activities arising from the opening up of the FCA. The necessary upgrading works would have major cost implications and private land
resumption/clearance would be necessary. There are main roads such as Fanling Highway, San Tin Highway, Castle Peak Road, Sha Tau Kok Road and Route 3 linking the three existing cross-boundary points (i.e. LMC, Man Kam To and Sha Tau Kok) to the main urban areas. There are checkpoints at Sha Tau Kok Road and Man Kam To Road near the FCA boundary controlling access to the control points. The issuance of Closed Road Permits is a regulatory mechanism currently adopted to confine the use of boundary control points by cross-boundary vehicles in accordance with the quotas allocated. The purpose of the quota system is to ensure that the boundary control points and the road network in their vicinity will not be overloaded, so that there is smooth traffic, especially freight traffic, across the boundary. This is of utmost importance given the increasing socio-economic interactions between Hong Kong and the Pearl River Delta Region. Opening up the approach roads to the control points would increase traffic volume which would adversely affect cross-boundary traffic. The lack of u-turning facilities for vehicles without Closed Road Permits to turn back is also a concern.

7 The Shenzhen Eastern Corridor is a cross-boundary project proposed by the Shenzhen authorities which aims to provide additional cross-boundary transport capacity, especially for goods vehicles, on the eastern side of Shenzhen to cater for increasing traffic generated from the economic activities between Hong Kong/Shenzhen and the Huizhou and Huiyang areas. According to Shenzhen’s plan, the proposed Eastern Corridor will help reduce container vehicles passing through the city center of Shenzhen. Liantang, an area to the north of Heung Yuen Wai in Hong Kong, has been proposed by the Shenzhen authorities as a possible crossing point for container and goods vehicles. We have not established the need of this new cross-boundary link and various impact assessments are also required to ascertain the feasibility of this proposal.\(^4\)

8 Regarding rail linkage, the existing East Rail links Lo Wu to Kowloon. The Sheung Shui to LMC Spur Line, passing through Sheung Shui and Kwu Tung North areas, is scheduled for completion in 2007. Depending on the timing of the proposed Kwu Tung North New Development Area (NDA), a railway station is planned to be developed within this NDA. Besides, Mainland and Hong Kong are looking into the feasibility of an Express Rail Link (ERL), which will link up Hong Kong, Shenzhen and Guangzhou, and is envisaged to reduce the travelling time between Guangzhou and Hong Kong to within one hour. The part of the rail link within the HKSAR would be conceived as the Regional Express Line (REL) envisaged in the Railway Development Strategy (RDS) 2000.

\(^4\) As advised by EPD, an air quality impact assessment needs to be carried out in connection with the proposed new boundary crossing at Liantang with a view to quantifying the air quality impact.
Sewerage, Services and Utilities

9 Apart from the Sha Tau Kok rural town, control points and the village clusters, there are basically no drains, sewerage and water supply infrastructure serving the FCA. A large part of the FCA is within the Deep Bay catchment with no existing nor planned trunk sewers. The nearest sewer connection within the FCA is quite far away from the planned/existing trunk sewers or the existing sewage treatment works (STWs) which are located over 2 km away along NT Circular Road. Unless adequate additional sewage infrastructure is provided in the new development proposals, new development within the FCA will exert further pressure on the water bodies in the North District and Deep Bay. In order to protect the water quality of Deep Bay, which is an ecologically sensitive area, treated effluent may need to be exported away from the Deep Bay Catchment unless very costly, high-level treatment is used.

10 The design standard of the four major river training projects (i.e. Rehabilitation for River Ganges, Regulation of Shenzhen River, Improvement Works for the Eastern Main Drainage Channel for San Tin and Works for Western Main Drainage Channel for San Tin which are scheduled for completion from 2005 to 2008) is to prevent major flooding events with a return period of 50 years. These projects, when completed, should be able to support future rural or low-density developments within the FCA. Project proponents of new projects within the FCA should be required to formulate drainage proposals to alleviate the drainage impacts on the adjacent areas as appropriate.

11 To serve the existing village and rural type development within the FCA, it is expected that the water demand of the proposed supporting services e.g. refuse collection points, public toilets, fire-fighting service, etc. will be small, extension of the existing local distribution mains should suffice.

Recognized Villages and Other Developments (Plan 6)

12 There are a total of 21 recognized villages (Annex 2) within the FCA. Most of the villages are located in Sha Tau Kok, Lin Ma Hang, Heung Yuen Wai, Ta Kwu Ling and the area west of Lo Wu. Besides, permitted burial grounds for the indigenous villagers are also found within the area. At present, there is metered water supply to all the recognized villages within the FCA, apart from San Kwai Tin.

13 Sha Ling (Sandy Ridge) area near Lo Wu is a cemetery area, and has many existing graves.
Its Surrounding Areas

Hong Kong Context (Plan 7)

14 The surrounding areas of the FCA on the Hong Kong side are mainly wetland, hilly terrain and scattered village settlements. The existing and planned land uses are set out as follows:

(a) Hung Fa Leng to Wo Hang: several recognized villages are found with stretches of agricultural land along Sha Tau Kok Road. On the Luk Keng and Wo Hang Outline Zoning Plan (OZP) No. S/NE-LK/7, the zoning of the area mainly reflects the existing village type development and agricultural uses which are respectively designated as “V” and “Agriculture” (AGR). Hilly slopes adjoining the Pat Sin Leng Country Park are designated as “Conservation Area” (CA) on the OZP. Hung Fa Leng which connects the FCA and Sha Tau Kok is a mountainous area without any planned development.

(b) Wo Keng Shan: now mainly used as a landfill (NENT Landfill) which is expected to be exhausted in about 9-14 years. The long-term use of the landfill after its closure needs to be further studied. Other areas adjacent to the FCA are designated as “Green Belt” (GB), “AGR” and “V” on the Wo Keng Shan OZP No. S/NE-WKS/3 to reflect the existing uses of the area.

(c) Ta Kwu Ling and Hung Lung Hang: primarily rural area with hilly terrain. On the Ping Che and Ta Kwu Ling OZP No. S/NE-TKL/7 and Hung Lung Hang OZP No. S/NE-HLH/3, the area is mainly designated as “GB”, “AGR”, “V” and “Government, Institution or Community” (GIC) (e.g. the water treatment works next to the East Rail at Sheung Shui) to reflect the existing uses.

(d) Kwu Tung North: rural in nature with recognized villages at Ho Sheung Heung and Yin Kong. Existing open storage can be found in Fung Kong near Ho Sheung Heung Road with agricultural land along Fanling Highway. On the Kwu Tung North OZP No. S/NE-KTN/4, the areas of Kwu Tung North are mainly zoned as “Open Storage”, “V”, “GB”, “AGR” and “Industrial” (“I”). The area has been proposed as a NDA to cater for the need of long-term population growth though the development programme has not been decided. OZP will be prepared to reflect the planned uses of the NDA.

(e) Area west of LMC Boundary Control Point: mainly wetland and the planning intention for the area is conservation according to the “Study on the Ecological Value of Fish Ponds in the Deep Bay Area”. The Mai Po Marshes, the Inner Deep Bay and the surrounding fish
ponds have been listed as a Ramsar Site. On the Mai Po & Fairview Park OZP No. S/YL-MP/4, Mai Po is mainly designated as “SSSI” and “CA” to reflect its ecological importance.

(f) Shenzhen River: in between Shenzhen and the FCA is the Shenzhen River. Hong Kong and Shenzhen are now jointly carrying out Stage III of the Shenzhen River Regulation Project to alleviate the threat of flooding in north and north-east of the New Territories and Shenzhen (Plan 8). The project is scheduled for completion in 2006.

Shenzhen Context

15 There has been rapid urbanization on the Shenzhen side to the immediate north of the FCA. According to the Shenzhen Comprehensive Plan (1996-2010) approved by the State Council in January 2000, major development will focus on the Special Economic Zone near the boundary (Plan 9).

**Luohu District (羅湖區)**

(a) With a total area of about 74.2km², Luohu District was the earliest and the most intensely developed district in Shenzhen. It has two boundary crossings adjoining Hong Kong, namely the Luohu and Man Kam To boundary control points.

(b) Shenzhen is now in the course of redeveloping the existing control point at Luohu with a view to increasing its handling capacity to 400,000 passengers/day. Shenzhen subway line 1 under construction will connect Luohu control point through Huaqiao City (within Futian District) to “Window of the World” in 2004. It is planned that by 2010, the subway line 1 will be extended to Baoan International Airport.

(c) The planned land uses of Luohu District are set out in the Luohu District Plan 1998 - 2010 (深圳市羅湖區分區規劃 1998-2010) (the Luohu Plan), endorsed by the Shenzhen Government in November 2000. One of the primary objectives of the Luohu Plan is to develop Luohu District as a major commercial and business district (商贸中心). It is planned that by 2010, the commercial land would increase to 466 ha, an increase of 56% compared with the 1999 level.

(d) Liantang is within the Luohu District and has a population of about 30,000 (with a planned population of about 60,000). As mentioned earlier, Shenzhen is considering to develop the Eastern Corridor to Huizhou and Huiyang and Liantang has been identified by Shenzhen as a possible crossing point for container and goods vehicles.
to Shenzhen’s plan, the subway network will be extended to Liantang but there is no firm programme yet.

**Futian District (福田區)**

(e) Futian District has a total area of about 78.88 km². To the southwest of LMC Loop is the Futian bonded area (1.35km² in size) founded in May 1991 with the State Council’s approval. The general land use planning of Futian District is outlined in the Futian District Plan 1998 - 2010 (深圳市福田區分區規劃 1998-2010) (the Futian Plan) approved in December 2000.

(f) The objective of the Futian Plan is to develop Futian as the administrative, business and commercial center of Shenzhen. This would be achieved by focusing resources on the development of the Futian Central District (福田中心區). Commercial land would be increased from 119 ha to 230 ha in 2010, an increase of 93% from the present level. At the same time, more G/IC facilities (e.g. cultural, sports, hospitals and educational) would be provided. The Futian Plan would relocate existing industrial uses by reducing the proportion of industrial land from the current 5.3% level to 2.8% level in 2010.

(g) The CBD in Futian District, about 413ha, would be the future administrative, business and commercial centre of Shenzhen. Planned employment opportunities are about 260,000. Construction commenced in 1999 is targeted for completion in 2010.

(h) As part of the first phase of the Shenzhen subway development, subway line 4 under construction will connect the existing Huanggang control point (which will be linked up with the KCRC LMC Station via a pedestrian footbridge) with the Futian CBD in 2004. By 2010, Shenzhen will extend line 4 to the Longhua town within the Baoan District.

**Planning Intention Of FCA**

**Principles**

16 Having regarding to the preceding analyses, areas within the FCA are found to have no immediate potential for development, because of the following:-

(a) Most of the land in the FCA are terrains or hilly areas which are not suitable for

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1 The establishment of the Futian bonded area is to attract foreign investment by offering policy advantages in several aspects. For example, Chinese and foreign companies may invest in the bonded area or set up trading, warehousing, export processing enterprises, financial institutions, exhibition and other enterprises approved by the Government. The goods transported into the bonded area from abroad or vice versa shall be exempted from the import duties and import and export licences.
development;

(b) The FCA covers or is in proximity to a number of ecologically sensitive sites including the Mai Po and Inner Deep Bay Ramsar Site, wetlands and fish ponds in the Inner Deep Bay, the freshwater stream in Lin Ma Hang and the “fung shui” woodland in Muk Min Tau. Developments will have adverse impact on these ecologically sensitive sites; and

(c) There is a lack of infrastructure in the FCA such as roads, sewage treatment facilities, drainage and water supply. In particular, the FCA is unsewered except for a small portion in Sha Tau Kok rural town. Provision of infrastructure and supporting services will incur hefty investment and require a long lead time.

17 Besides, alternative land is available in other parts of Hong Kong to cater for the future housing or office/commercial land requirement. Therefore, in the short term, the planning intention of the FCA will be to preserve its status quo and existing character whereas for the medium to long-term planning of the FCA, some considerations and overriding principles will be taken into account as follows:-

(a) New proposal must be justified by uses benefiting Hong Kong’s economy and making use of the strategic location of the area. In the short term, the existing uses (e.g. villages and agriculture) therefore should be confirmed through the preparation of statutory plans whilst in the medium to long-term, we need to identify possible uses taking account of the locational advantages of the boundary area whilst bringing mutual benefits to Hong Kong and Shenzhen;

(b) Given the absence of infrastructure within the FCA, huge investment on the provision of infrastructure will be indispensable to any new developments there. Hence, whilst the short-term uses of the FCA are to preserve its existing countryside character, the long-term uses of the FCA should be high-value added with corresponding plan to include new infrastructure or supporting facilities; and

(c) The interface with Shenzhen needs to be duly considered as our existing FCA directly adjoins Shenzhen. In particular, the Futian and Luohu Districts are the core business and administrative area of Shenzhen situated next to the FCA. This is an important interface that warrants careful consideration in planning for new developments within the FCA.

Selection Criteria

18 In identifying possible development areas within the FCA, the following selection criteria have been adopted:-
Implementation Consideration
(a) The possible development areas should include sizable and flat land, allowing easy implementation without incurring huge investment on land production (including resumption, site formation and servicing). The extent of government land to be included will be an important factor to be considered as it will help minimise land resumption and social interruption, and hence, public objection to be incurred. Areas with existing uses e.g. recognized village and cemetery, where re-provisioning is necessary should be avoided as far as possible;

(b) Besides, possible development areas should be able to accommodate measures to safeguard boundary security;

Economic Consideration
(c) The possible development areas should be large enough to allow viable developments that are mutually beneficial to Hong Kong and the Mainland, especially Shenzhen;

Environmental Consideration
(d) Areas which have insurmountable environmental problems or ecological importance (e.g. wetland) should be avoided and the water quality of Deep Bay and Mirs Bay should not be adversely affected, etc. Hilly areas (e.g. Hung Fa Leng) which may have conservation value and the SSSI at Lin Ma Hang should also be avoided; and

Infrastructural Consideration
(e) The possible development areas should facilitate cross-boundary movement of people and goods without overloading the existing transport network e.g. area that would be easily connected by cross-boundary road/rail infrastructure is preferred.

Based on the above criteria, three areas are identified to have potential for development in the medium to long-term within the FCA, namely the LMC Loop, Heung Yuen Wai and Kong Nga Po (Plan 10). The following highlight their comparative advantages and constraints.

LMC Loop

Advantages

(a) site created as a result of Shenzhen River Regulation but subject to (e) below;

(b) close to the Shenzhen Futian commercial area which will be part of the Shenzhen’s
central urban cluster;

(c) near the existing Huanggang crossing and the planned LMC Station of the Spur Line;

**Constraints**

(d) lack of infrastructure;

(e) about 1 million m$^3$ contaminated and 3 million m$^3$ uncontaminated mud have been deposited in the LMC Loop during river training. Together with the bottom layer of the mud in the Loop, about 4.5 million m$^3$ mud would require removal or treatment in compliance with EI/AO requirements. This may take years and the cost could be prohibitively expensive. The meander surrounding the LMC Loop is an ecologically restored site provided to compensate for the ecological damage caused by the Shenzhen River Regulation Stage I & II Works;

(f) ecological impact of development there needs to be carefully assessed in view of its proximity to the wetland area;

(g) although the existing LMC Road between Castle Peak Road and Ha Wan Tsuen Road will be widened to a two-lane carriageway by 2007, the capacity of the LMC Road and Ha Wan Tsuen Road may need to be further increased to cope with the additional traffic;

**Heung Yuen Wai**

**Advantages**

(h) Heung Yuen Wai (or Liantang in Shenzhen) has been proposed by Shenzhen as a new crossing point;

(i) subject to feasibility studies to examine the need of the proposed Eastern Corridor and its connection with our road network, accessibility of Heung Yuen Wai will be greatly enhanced through the development of this new cross-boundary link;

**Constraints**

(j) lack of infrastructure;

(k) existing rural character and areas with conservation value would be disturbed;
(l) private land will be affected and resumption is necessary;
(m) substandard Lin Ma Hang Road and Ping Che Road require improvement;

Kong Nga Po

Advantages

(n) in proximity to the existing crossing points at Lo Wu and Man Kam To;
(o) as an extension to Sheung Shui/Fanling New Town;
(p) possible connection to the Shenzhen's proposed Eastern Corridor;

Constraints

(q) lack of infrastructure;
(r) improvement of the existing Man Kam To Road is necessary;
(s) private land will be affected and resumption is necessary; and
(t) hilly terrain calls for site formation work.

20 Apart from the LMC Loop which has a clear-cut boundary in accordance with the re-trained Shenzhen River, only broad boundaries have been demarcated for Heung Yuen Wai and Kong Nga Po to set out the long-term potential of these areas because further studies are required to define the exact site boundaries with regard to the requirements of specific uses to be provided therein and a welter of issues pertaining to existing land uses, site topography and other constraints. Detailed description of the three sites is at Annexes 3 to 5.

Identification Of Possible Uses

21 Different uses have been proposed for incorporation in the FCA taking account of different views raised by the public in the context of HK2030 Stage 2 public consultation. Some general views transpire from the public consultation are summed up as follows:-

(a) Many have questioned the need for such a large security zone on our side of the boundary; whilst on the other side, the developed area of Shenzhen almost adjoins the boundary. Some have pointed out that the need for opening up the FCA for development
should be examined in the light of the overall needs of Hong Kong;

(b) There are also suggestions that any proposed use of the FCA should bring mutual benefits to both Hong Kong and the Mainland, and should complement the development on the other side of the boundary. Suggestions for possible use of FCA have been put forward for logistics centre, tourism, entertainment, business uses and international schools, etc. Nevertheless, some have opined that any development should not compromise boundary security nor adversely affect the environment, particularly the sites of ecological significance and local heritage. The Government should strike a balance between development and environmental protection; and

(c) Some green groups are of the view that given the existence of many ecologically sensitive areas within the FCA, detailed study on the ecological value of FCA and its nearby areas needs to be undertaken before any decision on opening up of the FCA for development is made.

22 Major proposals suggested for the FCA include the following:-

(a) Commercial/office: Given the busy cross-boundary interactions, the existing crossing points e.g. Lo Wu and LMC Loop could incorporate commercial/office uses (e.g. office and retail) to cope with the needs and requirements of the cross-boundary passengers.

(b) Duty free area: Being strategically located between Shenzhen and Hong Kong and in proximity to the boundary control points, the FCA together with Shenzhen Special Economic Zone have great potential to be developed into a duty free area. Within the duty free area which comprises Shenzhen and the FCA, there should be division of functions: Shenzhen to concentrate on production side, especially hi-tech products whereas the FCA to focus on the provision of professional legal and financial services aimed at serving the Mainland market.

(c) Manufacturing and hi-tech base (including garment, information-technology, Chinese medicine): The proposed manufacturing activities to be incorporated in the FCA mainly comprise garment and other manufactured products of famous brand name. Free flow of Shenzhen residents to the FCA should be allowed so as to make use of Mainland labour and talents. The activities could also provide managerial job opportunities for Hong Kong residents.

(d) Inland port/logistics park: Making use of its strategic location at the boundary, the FCA may be developed as an inland port to serve as a container transfer station and provide
logistics facilities in order to enable efficient processing of goods.

(e) Tourism: The tourism proposal mainly focuses on Sha Tau Kok area (including Chung Ying Street) and its neighbouring rural areas as a tourist attraction point for the development of eco-tourism.

(f) Entertainment centre: To develop a range of entertainment facilities to attract the patronage of Mainland and overseas visitors.

(g) Trade Expo: To develop convention and exhibition facilities to attract foreign and Mainland firms.

23 In considering the aforesaid uses, it is considered crucial to set out the following criteria in considering which of the above uses should be taken further:

(a) taking advantage of the strategic location offered by the FCA, i.e. areas in close proximity to Shenzhen whilst within the boundary of Hong Kong;

(b) strengthening Hong Kong’s role as a window/gateway to Mainland;

(c) being compatible with Hong Kong and Shenzhen development, achieving a “win-win” situation for both sides;

(d) enhancing Hong Kong economy by means of high value-added and revenue generating; and

(e) maintaining boundary security and facilitating Mainlanders’ access to the proposed uses within the FCA.

24 In the light of the above, our assessment of the possible uses, many of which have been raised in the Stage 2 consultation, for inclusion in the FCA is as follows:

(a) Commercial/office: As such uses are not land-intensive, the existing crossing points e.g. Lo Wu and LMC Loop could incorporate commercial/office uses (e.g. office and retail), if justified, to cope with the needs and requirements of the cross-boundary passengers as part of the existing control points or future developments within the FCA. Moreover, according to the assessment of future development needs and land supply, there is no urgent requirement for commercial/office development in the FCA.
(b) Duty free area: The recently concluded Closer Economic Partnership Arrangement (CEPA) already covers tariff arrangements between Hong Kong and the entire Mainland. Same benefits to be offered by CEPA would apply to the entire Hong Kong rather than the FCA. The feasibility and need of setting up a duty free area within the FCA call for further study.

(c) Inland port/logistics park: This proposal would help strengthen Hong Kong's hub functions, reduce cross-boundary vehicular traffic and restructure the inorderly development of container backup uses in the New Territories. However, given the availability of relatively cheap and readily formed land in Shenzhen, the high cost to form the land and provide infrastructure (including road and rail) within the FCA should be taken into account in considering the viability of this proposal. Moreover, the consolidation of containers within the inland port for transportation to our container port would reduce the cross-boundary trips but the impact on Hong Kong drivers' earnings needs to be addressed.

(d) Tourism: Given its rich ecological, heritage and cultural resources, the FCA including Heung Yuen Wai and Sha Tau Kok offers good potential for tourism development. However, lack of infrastructure, e.g. road and public transport, will greatly undermine successful implementation of tourism within the FCA. To develop “mass” tourism may cause an adverse impact on the existing environment. Eco-tourism, if properly organized and controlled, will be a possible option from environmental viewpoint though it might only generate limited economic benefits (e.g. tourist spending in food and drinks, shopping, etc.).

(e) Entertainment centre: The proposed entertainment centre could include different facilities, e.g. golf course, shopping mall for famous brand names. Resort hotels could be incorporated as part of the development to attract the patronage of Mainlanders (permit free access), overseas and local visitors. This will be a boost to Hong Kong tourism and also tax revenue. The proposed entertainment centre would also be compatible with the Shenzhen's development as an international city. However, the huge inflow and outflow of visitors will have security implications.

(f) Manufacturing and Hi-tech Base: The proposed manufacturing base is not necessarily located within the FCA and there are sufficient industrial land or buildings in Hong Kong for the development and production of “Hong Kong Labels”. For the research and hi-tech activities (e.g. Chinese medicine centre), it may be better for these facilities to be integrated with the local tertiary institutions (e.g. medical schools of HKU and CUHK or HKBU School of Chinese Medicine) in order to achieve a synergy effect. In accordance
with the proposals put forward by the public, the proposed manufacturing or hi-tech activities are intended to capitalize on the opportunities offered by CEPA and the FCA would offer locational advantages to allow Mainland labour to work in the manufacturing or hi-tech/high-value added activities. Whether CEPA would help bring back manufacturing industry to Hong Kong is subject to assessment. Besides, depending on the nature of the proposed manufacturing or hi-tech/high-value added activities, such proposed uses could in fact be accommodated in the existing vacant industrial buildings within Hong Kong and creation of another manufacturing base in the FCA would affect the revitalization of our industrial areas. At present, there are sufficient industrial land and land earmarked for “business use” in the main urban area. Provision of general industrial uses in the FCA may not be cost effective as compared to using existing industrial land in our urban area. Other relevant considerations such as whether the proposed manufacturing activities will be high-value added or compatible with Shenzhen’s development, in particular the neighbouring Futian and Lo Wu Districts which are the central business district of the city, also need to be thrashed out. In this regard, only manufacturing or production activities requiring strategic location may be considered in the FCA.

(g) Trade Expo: The proposed trade expo could provide a window for Mainland manufacturers to showcase their products to overseas and Hong Kong buyers, and at the same time, act as a base for international firms to conduct sourcing activities, with the support of Hong Kong’s professional and other business services. It may also provide large-scale exhibition area for Mainland or overseas firms to organize thematic or topical exhibition activities. However, the market demand for such facilities near the boundary area has yet to be established. The presence of highly product-specific wholesale markets in the Pearl River Delta and other parts of the Mainland will inevitably pose competition to the proposed facility. There is a need to ascertain the business case for setting up such a facility, taking into account the supply of similar facilities in Hong Kong. The success of such a facility would also depend on whether it possesses unique strengthens, such as entry of Mainland visitors without permit requirement.

25 Based on the aforesaid assessment, trade expo, logistics and entertainment uses could be considered as potential uses to be developed within the FCA. Subject to the resolution of the issues as deliberated above, the proposed high value-added or hi-tech production activities could also be further considered. Yet, it should be noted that these identified uses will be subject to further study by the policy bureaux concerned as well as various impact assessments (e.g. environment, traffic and engineering) to ascertain their feasibility if they are to be taken forward subsequently.
Formulation Of Broad Land Uses

Medium to Long-term Development

26 Having regard to the identified uses in the above, the following broad land use options are set out for LMC Loop, Heung Yuen Wai and Kong Nga Po subject to detailed feasibility assessments (including traffic, environmental and engineering aspects).

LMC Loop

27 A possible development option for the LMC Loop is the setting up of trademart/expo facilities. If we are to pursue the trade expo option, we need to make use of the locational advantages of the FCA and attract those trading and business activities related to the Mainland and Hong Kong and which would require Hong Kong’s professional services.

28 In connection with the development of the Loop, the existing connecting road (e.g. LMC Road) needs to be further widened to cope with the increased traffic. Also, specially designed linkages (e.g. enclosed travellators) between the Loop area and the future LMC Station (with a distance of about 1km) could be developed to enable cross-boundary passengers making use of the pedestrian footbridge to Shenzhen. Also, with the opening of the Shenzhen-Hong Kong Western Corridor, it is expected that the cross-boundary goods vehicles via the LMC crossing would be lesser and there would be capacity for the LMC crossing to handle additional passenger vehicles induced by the new public transport terminus to be incorporated in the Loop.

29 Moreover, in the longer term, there is a possibility to keep in view the development of the proposed PRD inter-city rapid transit which may be extended up to Shenzhen Huanggang. If that is the case, Huanggang may serve as a major interchange for three systems (Hong Kong rail, Shenzhen subway and the inter-city rapid transit system) at one point and therefore in the longer term, there is scope to explore the idea of using the LMC Loop as another crossing for Hong Kong residents to transfer to the PRD inter-city rapid transit8.

30 As discussed earlier, subject to the resolution of the issues as set out in paras. 24 (c) and (f), an option to include other economic activities, such as high value-added, hi-tech production

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8 If the LMC Loop is used as another crossing point, additional boundary clearance facilities together with public transport interchange may need to be provided within the LMC Loop or within the LMC Control Point to be connected to the LMC Loop by means of an enclosed passenger link.
and logistics activities requiring strategic location could also be further considered in the LMC Loop.

31 Preliminary ideas on the proposed trade expo are set out in Annex 6.

**Heung Yuen Wai & Kong Nga Po**

32 Heung Yuen Wai and Kong Nga Po represent long-term development areas, the uses of which would be closely related to cross-boundary activities. It should be noted that the ever-increasing cross-boundary vehicular traffic brought by Hong Kong container port has contributed much to the congestion at the existing boundary crossings and the associated road network and to avoid bringing the cross-boundary vehicular traffic into Hong Kong's internal road network, Heung Yuen Wai may offer a potential strategic location for functioning as a "cargo transit" area and logistics centre, offering the following merits:-

(a) Development of the proposed Eastern Corridor on the Shenzhen side would provide a more direct road linkage connecting Heung Yuen Wai with different sources of cargo from Guangdong, particularly the eastern cities including Huizhou, Meizhou and Chaozhou, thus expanding our cargo catchment to these areas and even further. It will also help enhance and strengthen the competitiveness of Hong Kong port in face of the rapid development of Shenzhen Port in near future.

(b) With the consolidation of containers in a designated location, the existing port backup land in the NT could be restructured and the traffic caused by goods and container vehicles would also be reduced. These would help improve our existing environment.

(c) Success of this concept will hinge on the development of a dedicated rail serving this cargo transit area. Customs and related facilities need to be incorporated as part of the Heung Yuen Wai development. This will help ensure smooth and timely transfer of the containers between the container port and the backup land as well as avoid creating additional traffic load on Hong Kong road network. Moreover, development of a dedicated rail link to service the cargo transit area will have the environmental benefit of minimizing air pollution. Taking account of the future development of cross-boundary links, Heung Yuen Wai may have the potential for cargo transit facilities/logistics facilities making use of its strategic locations of railway and road connections. Notwithstanding such a conceptual development framework, we need to further ascertain the need and feasibility of extending new cross-boundary road and railway links to Heung Yuen Wai.

33 In addition to the development of cargo transit area/logistics centre, it is suggested that
depending on the future demand of cross-boundary activities, Heung Yuen Wai and Kong Nga Po should include uses pertinent to the cross-boundary activities in the long term in order to cope with the increasing socio-economic interactions between Hong Kong and the Mainland. Subject to detailed feasibility studies, both sites may be developed as an entertainment centre incorporating hotel and shopping mall which will become an entertainment centre of critical mass.

34 As to Kong Nga Po, given its proximity to the existing Sheung Shui/Fanling New Town and the planned Fanling North NDA, consideration could be given to the long-term potential of Kong Nga Po as a further extension of new town development subject to further studies and demand assessment.

**Short-term Development**

35 Apart from LMC Loop, Heung Yuen Wai, Kong Nga Po which, subject to further studies and impact assessment, have potential for development in the medium to long-term, there are no areas within the FCA that are found to have immediate potential for development with regard to the reasons as deliberated in para. 16 above.

36 Open storage/port back-up uses are considered inappropriate to be permitted within the existing FCA due to:–

(a) the general lack of infrastructure in the FCA which would be unduly ruined by the proliferation of such uses;

(b) the areas concerned are subject to inundation and therefore open storage/port back-up uses which would necessitate extensive land and pond filling would aggravate the situation; and

(c) given a number of ecologically and environmentally sensitive sites within the FCA, we should better minimize or avoid putting these potentially polluting/damaging developments in this area.

37 Besides, according to the “Consultancy Study on the Development of Tourism in the Northern New Territories” completed for the Tourism Commission in December 2002, Heung Yuen Wai and the traditional villages around it have been identified as a cluster with significant cultural and heritage tourism potential by virtue of their unspoiled natural and heritage setting. The
study has recommended to develop low-impact, specialized heritage, cultural and nature-based activities which will have up-market tourism potential. Therefore, in considering the short-term and long-term development of Heung Yuen Wai, its tourism value needs to be duly considered with regard to the possible development options identified earlier.

38 There are suggestions to open up Sha Tau Kok for tourism development in view of its proximity to the natural resources of the neighbouring ecologically important areas such as Kat O, Ap Chau, Double Haven and other outer islands in Sha Tau Kok Hoi. Chung Ying Street in Sha Tau Kok is also named as a possible location for tourism development because of its unique historical background. The Shenzhen side also has plans to develop Chung Ying Street for tourism. From the planning perspective, it is noted that development of tourism at Sha Tau Kok at a massive scale would have environmental impact as the area has only been planned to be developed as a small rural town. Its existing supporting services including water, sewerage and drainage have been planned on a population size of around 5,000. Influx of large number of tourists to the area will likely create adverse impact on its environment. Also, the limited capacity of Sha Tau Kok Road could not allow the use of the road by large number of coaches or private vehicles which will otherwise affect the cross-boundary vehicular traffic via Sha Tau Kok crossing. Moreover, in view of the inherent security risks in the special physical setting at Sha Tau Kok (being an open boundary with no physical barrier or control point facilities) and the fact that smuggling remains a concern in Sha Tau Kok, opening up the location and its vicinity for tourism development will give rise to severe security concern.

39 Without compromising the boundary security, eco-tourism compatible with the setting of Sha Tau Kok rural town may be considered in accordance with the existing layout plan for Sha Tau Kok (Plan 11).

Next Step

40 The aforesaid analyses briefly set out an overall framework for identifying the potential development areas within the existing FCA and set out the possible land use options in the short to long-term perspective. Further impact assessments (e.g. environment, traffic and engineering) would be necessary to ascertain the feasibility of the potential development areas and the proposed uses.
### List of Sites of Ecological/Conservation Value

<table>
<thead>
<tr>
<th>Location</th>
<th>Ecological/Conservation Value</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Wetlands</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mai Po Marshes and Fishponds within the Wetland Conservation Area</td>
<td>Mai Po Marshes and the contiguous fish ponds within the WCA are important wetland habitat for birds. A number of bird species of conservation concern have been recorded in this area.</td>
<td>The wetland in Mai Po has been designated as a Ramsar Site and the wetland and fishponds in the area are within the Wetland Conservation Area.</td>
</tr>
<tr>
<td>Hoo Hok Wai and Ta Sha Lok</td>
<td>A wetland area with large number of active fishponds, reinstated ponds (Shenzhen River Stage 2) and marshes. It is adjacent to the Wetland Buffer Area (“WBA”) and has a good field record of wetland birds, including species of conservation concern. Two rare dragonflies, <em>Rhodothemis rufa</em> and <em>Urothemis signata</em>, have also been recorded in this area.</td>
<td>An area of conservation importance.</td>
</tr>
<tr>
<td>Other wetlands of ecological/conservation importance</td>
<td>Any brackish or freshwater marshes over 1 ha in size or wetland sites identified by SUSDEV 21 and Terrestrial Habitat Mapping and Ranking Based on Conservation Value Study as having high ecological value within the FCA.</td>
<td></td>
</tr>
</tbody>
</table>

**Ecological Mitigation Areas**

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*Environmental Baseline Survey on Terrestrial Habitat Mapping and Ranking based on Conservation Value, SUSDEV (16 August 2000)*
<table>
<thead>
<tr>
<th>Location</th>
<th>Ecological/ Conservation Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lok Ma Chau Bend</td>
<td>The site is a mitigation area for the fishpond loss due to the Shenzhen River Regulation Project. Aquatic plants have been established along the “Bend” and the site has been reinstated and largely covered by vegetation.</td>
</tr>
<tr>
<td>Ecological mitigation area near Yuen Leng Chai (wetland)</td>
<td>Two fishponds temporarily affected by the construction works of the Shenzhen River Regulation Project Stage 3 (near Yuen Leng Chai) will be restored and enhanced after the completion of the construction works as an ecological mitigation measure.</td>
</tr>
<tr>
<td>Fung Shui Woods/Woodlands</td>
<td></td>
</tr>
<tr>
<td>Nam Hang Woodland (south of Man Kam To Police Station)</td>
<td>It is natural, large in size and dominated by species native to Hong Kong. It is adjacent to two fishponds and several bloodworm ponds. The woodland provides an important breeding ground for many species, especially birds and mammals.</td>
</tr>
<tr>
<td>Woodlands near Muk Wu Tsuen</td>
<td>They are considered to have ecological importance. They are natural and fairly large in size and could provide breeding and resting ground for species that feed in the adjacent agricultural lands. Two rare butterfly species, <em>Horaga albimacula</em> and <em>Mycalesis sangaica</em>, have been recorded in this area.</td>
</tr>
<tr>
<td>Chow Tin Tsuen Fung Shui Wood</td>
<td>A fung shui wood (0.2 ha) with some signs of human disturbance but without serious damage to the vegetation.</td>
</tr>
<tr>
<td>Kan Tau Wai Fung Shui Wood</td>
<td>A fung shui wood (0.4 ha) with some signs of human disturbance but without serious damage to the vegetation.</td>
</tr>
<tr>
<td>Location</td>
<td>Ecological/Conservation Value</td>
</tr>
<tr>
<td>--------------------------</td>
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</tr>
<tr>
<td>Tsung Yuen Ha Fung Shui Wood</td>
<td>A fung shui wood (0.5ha) with few signs of human disturbance at its edge. A tree species of conservation concern, <em>Aquilaria sinensis</em>, has been recorded.</td>
</tr>
<tr>
<td>Heung Yuen Wai Fung Shui Wood</td>
<td>A large fung shui wood (1.9 ha) with some signs of human disturbance but without serious damage to the vegetation. A tree species of conservation concern, <em>Aquilaria sinensis</em>, has been recorded.</td>
</tr>
<tr>
<td>Tong To Fung Shui Wood</td>
<td>A fung shui wood (0.7 ha) with some signs of human disturbance but without serious damage to the vegetation. Tree species of conservation concern, <em>Aquilaria sinensis</em> and <em>Xylosma longifolium</em>, have been recorded.</td>
</tr>
<tr>
<td>Muk Min Tau Fung Shui Wood</td>
<td>A large fung shui wood (2.3 ha) with few signs of human disturbance. The fung shui wood is found on a flat-land and is considered rare in Hong Kong. Tree species of conservation concern, <em>Aquilaria sinensis</em> has been reported in the fung shui wood. Some rare bryophytes (Hypnaceae) have also been observed at the stream. A rare reptile, <em>Hemidactylus garnotii</em>, uncommon butterflies, <em>Iraota timoleon</em>, <em>Neopithecops zalmora</em>, <em>Delias hyparete</em> and a mammal, <em>Hystrix brachyura</em> (Chinese Porcupine), have been recorded in this area.</td>
</tr>
<tr>
<td>Sheung Tam Shui Hang Fung Shui Wood</td>
<td>A fung shui wood (2.0 ha) with few signs of human disturbance. A rare reptile, <em>Opisthotropis balteata</em>, an uncommon butterfly, <em>Delias hyparete</em>, and tree species of conservation concern, <em>Aquilaria sinensis</em> and <em>24</em></td>
</tr>
<tr>
<td>Location</td>
<td>Ecological/Conservation Value</td>
</tr>
<tr>
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</tr>
<tr>
<td>Shan Tsui Fung Shui Wood</td>
<td>Xylosma longifolium, have been recorded. <em>Manis pentadactyla</em> (Chinese Pangolin) has also been reported in this area.</td>
</tr>
<tr>
<td>Lin Ma Hang Fung Shui Wood</td>
<td>A large fung shui wood (2.2 ha) behind the village is well preserved from disturbance. <em>Aquilaria sinensis</em> and <em>Xylosma longifolium</em>, tree species of conservation concern, have been recorded.</td>
</tr>
</tbody>
</table>

**Habitat of Ecological Interest/Importance**

<p>| Starling Inlet coastal waters and mudflat | Main feeding site for Great Egrets and Little Egrets nesting on A Chau. One of the largest mangrove stands in HK with a diverse benthic macrofauna community. Seagrass (<em>Halophila beccarii</em>) are also found in the shallow coastal waters. The mudflat and seagrass habitats are ranked as of high conservation value in the SUSDEV 21 study. |
| Hung Fa Leng (Robin’s Nest) | It is a site of botanical significance and known for its diversity of plant species. There are extensive areas of woodland in the village up to the 300 meter level. The area is highly scenic and identified as strategically significant in the TDS conservation strategy. A large population of locally |</p>
<table>
<thead>
<tr>
<th>Location</th>
<th>Ecological/Conservation Value</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>SSSI</td>
<td><strong>Ecological/Conservation Value</strong></td>
<td><strong>Remarks</strong></td>
</tr>
<tr>
<td><strong>A Chau SSSI</strong></td>
<td>Rare tree <em>Xylosma longifolium</em> has been reported.</td>
<td>An existing SSSI</td>
</tr>
<tr>
<td><strong>Lin Ma Hang Lead Mine SSSI</strong></td>
<td>It is an important habitat of birds including Night Heron, Little Egret, Great Egret, Black-headed Gull and Herring Gull. The site also provides a breeding site for passage migrants.</td>
<td>An existing SSSI</td>
</tr>
<tr>
<td><strong>Lin Ma Hang Stream</strong></td>
<td>One of the most important bat colonies in Hong Kong. The galleries at this site provide a resting and breeding site for a number bat species.</td>
<td>An existing SSSI</td>
</tr>
<tr>
<td><strong>Habitats of high ecological value identified by SUSDEV 21 and Terrestrial Habitat Mapping and Ranking Based on Conservation Value Study</strong></td>
<td><strong>Lowland Forests</strong></td>
<td><strong>Mixed Shrublands</strong></td>
</tr>
<tr>
<td><strong>Lowland Forests</strong></td>
<td>There are patches of lowland forests within the FCA. This type of habitat is considered to have high ecological value by the studies.</td>
<td>The lowland forests over 1 ha and identified by SUSDEV 21 and Terrestrial Habitat Mapping and Ranking Based on Conservation Value Study should be zoned “CA”.</td>
</tr>
<tr>
<td><strong>Mixed Shrublands</strong></td>
<td>There are patches of mixed shrublands within the FCA. This type of habitat is considered to have high ecological value by the studies.</td>
<td>The mixed shrublands identified by SUSDEV 21 and Terrestrial Habitat Mapping and Ranking Based on Conservation Value Study</td>
</tr>
</tbody>
</table>
Recognized Villages Within FCA

Liu Pok
San Uk Ling
Muk Wu
Nga Yiu
Lo Shue Ling (also known as Chow Tin Tsuen)
Fung Wong Wu
Tong Fong
Kan Tau Wai
Chuk Yuen
Tsung Yuen Ha
Heung Yuen Wai
Ha Heung Yuen
Lin Ma Hang
San Kwai Tin
Tong To
San Tsuen
Muk Min Tau
Tam Shui Hang
Shan Tsui
Kong Ha
Lok Ma Chau

Note:
According to the New Territories Small House Policy, an indigenous villager is allowed to apply for permission to erect for himself during his lifetime a small house on a suitable site within his own village. An 'indigenous villager' is a male person at least 18 years old who is descended through the male line from a resident in 1898 of a recognized village which is shown on the list of recognized villages approved by the Director of Lands.
Annex 3

Lok Ma Chau Loop

The Site

- The LMC Loop with an area of about 96 ha is located inside the FCA with restricted access. It is not covered by any statutory plan and has no basic infrastructure. It has been used as a dumping ground for contaminated and uncontaminated mud dredged from the Shenzhen River. Reinstatement and landscaping of the Loop area were completed by the Drainage Services Department in 2000. The land falls within the boundary of the HKSAR subsequent to the realignment of the Shenzhen River. It is close to Mai Po Ramsar site and is surrounded by contiguous fishponds with high ecological value.

Opportunities

- The LMC Loop is close to the Shenzhen Futian commercial area which will be part of the Shenzhen's central urban cluster, i.e. the city's political, economic and cultural centre according to the Shenzhen Comprehensive Plan (1996-2010). In particular, Futian District will be the administrative, cultural and commercial centre within the Central Urban Cluster. This Central Business District (CBD) will accommodate about 77,000 residents and provide working opportunities for about 260,000 people. The subway's Line 1 and Line 4 will converge in the CBD, and three subway stations will be located in the CBD. An efficient rail system will meet the needs of rapid growth in commuting to the CBD.

- Given the proximity to Shenzhen Futian District, the LMC Loop offers good potential for commercial development or hi-tech development making use of its location advantages whilst minimising possible adverse impact on its neighbouring environmentally sensitive uses and wetland areas.

- In addition, the Loop is near the existing Huanggang crossing and the proposed LMC Station of the LMC Spur Line. Opportunities could be taken to develop linkages with these facilities with a view to enhancing the development potential of the area.

Constraints

- Development of the LMC Loop is not without problems and the major problems are highlighted as below:-

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10 Shenzhen Comprehensive Plan (1996-2010), Shenzhen Urban Planning and Land Administration Bureau
Environment

- As development will result in some form of effluent discharge and no sewerage infrastructure is planned for the area, any effluent discharge from development in the LMC Loop will seriously affect the water quality of Deep Bay. The environmental acceptability of the discharge of treated effluent into Deep Bay and the resulting water quality impact will need to be carefully assessed.

- Operation of industrial development there may give rise to gaseous emission, discharge of heavy metals, toxic substances and chemical wastes as well as noise nuisance. If these sources of pollutant are not properly managed and controlled, they will adversely affect the Mai Po Ramsar Site (about 3km downstream of the LMC Loop) and the surrounding wetland area.

- The site has been reinstated and largely covered with vegetation. In particular, the site has been colonized naturally by reed bed in certain locations where water may be retained in wet season. Moreover, the site is surrounded by the LMC Bend which is the original alignment of the Shenzhen River. The "Bend" is a mitigation area for the fishpond loss due to the training of Shenzhen River. Moreover, as the site is in the direct vicinity of Wetland Conservation Area, the ecological impact of the potential development in the LMC Loop will need to be carefully assessed.

- As the LMC Loop was previously used as a dumping site for soft sediment and about 1 million m$^3$ of it is contaminated, the environmental feasibility of opening the area for development is subject to further studies.

Engineering

- About 1 million m$^3$ of contaminated and 3 million m$^3$ of uncontaminated mud have been deposited in the LMC Loop. Together with the bottom layer of the mud in the Loop, a total of 4.5 million m$^3$ of mud would require to be removed or treated in-situ before land formation. Major infrastructure work at the Loop would likely disturb the contaminated mud at the site and adversely impact the restored river bend or the Shenzhen River itself. As advised by EPD, removal or disposal of the mud previously dumped at this site to either landfill or marine disposal ground is unacceptable. Disposal to landfill is not an option because of the quantity involved. Re-excavation of the sediments for marine disposal is not an option either because it contravenes the spirit of the London Convention. EPD points out that cleaning up this site is a must before further development and the process will be expensive. This would complicate and prolong site formation and sophisticated engineering works will be required to strengthen the river channel embankment and foundation. Further assessment of the feasibility of the
LMC Loop also needs to address the decontamination cost which should be included as part of the development cost. Decontamination of the site is expected to be grossly expensive and may render development of the site financially not viable.

- The site is not flooding prone area under existing condition but the proposed use should be subject to detailed assessment through the Drainage Impact Assessment process.

**Water Infrastructure**

- According to an initial assessment, if the future developments will incur a total water demand of not more than 5,000m$^3$/day (e.g. small resorts, hostels, tourist attraction points, etc.), upgrading of the existing water supply in the area may be required, e.g. construction of pumping station and service reservoir, and laying of associated water mains. A period of four to five years has to be allowed for planning, designing and carrying out the necessary works.

- If the developments will incur a total water demand of over 5,000m$^3$/day (such as large-scale residential, commercial, industrial, hotel or tourism developments), the existing water supply systems in the northern part of the New Territories will not be able to cope with. Upgrading of the existing water supply systems, including the extension of Ngau Tam Mei Treatment Works and Sheung Shui Treatment Works, construction of pumping stations and service reservoirs as well as extension of trunk water mains and distribution networks, will be necessary. The whole process of planning, designing and carrying out the necessary works may take six to seven years.

**Sewerage**

- There is no plan to extend the Sewerage Master Plan to the area. In order to protect the water quality of Deep Bay, treated effluent may need to be exported away from the Deep Bay Catchment unless very costly, high-level treatment is used. It is estimated that about eight years would be required for providing the necessary sewage infrastructure, e.g. the construction of one additional sewage treatment plant and connecting sewers in the released area. One additional year will be required if the sewage is to be treated at the existing treatment works because the facilities will need to be upgraded to meet the required standards.

**Vehicular access**

- The only vehicular access is via LMC Road. Under the Lok Ma Chau Spur Line project, the carriageway of Lok Ma Chau Road will be widened from 6.75m to 7.3m and the road will continue to be linked to Castle Peak Road. So far, there has been no proposal of further
widening of Lok Ma Chau Road to a dual two-lane carriageway and connecting it to Fanling Highway to form a junction thereon.
The Site

- The Heung Yuen Wai is located between Sha Tau Kok and Man Kam To. Within the FCA, the area is not covered by any statutory plan and has no basic infrastructure. The area contains some agricultural land and a number of hillocks. Development is restricted to the area between Lo Shue Ling in the west and Wong Mau Hang Shan (黃茅坑山) in the east.

Opportunities

- The development potential of Heung Yuen Wai which is opposite to the Liantang (蓮塘) township of Shenzhen is contingent upon the development of new cross-boundary link with Shenzhen. Being located in a strategic position to link up the Wai-Shen (惠深) and Shen-Shan (深汕) Expressways and providing a potential development axis towards the eastern part of Guangdong Province, the Liantang area has been planned by Shenzhen as a new cross-boundary point between Hong Kong and Shenzhen through the development of the Shenzhen Eastern Corridor.

- The Shenzhen Eastern Corridor is a proposal postulated by Shenzhen in its Comprehensive Plan (1996-2010) as a means to divert the container and goods vehicles from Man Kam To and Sha Tau Kok through a new boundary crossing at Liantang. On the mainland side, this road corridor from Liantang would link up with the expressway system such as Wai-Shen and Shen-Shan Expressways and provide a development axis to the eastern part of Guangdong Province. On the Hong Kong side, the road corridor may link up with a long-term project - the Eastern Highway proposal which is a very long-term road linkage proposal aiming to provide direct traffic movement from boundary through the eastern part of the New Territories (probably Fanling) to eastern parts of the Metro Area. However, it should be noted that given its lengthy alignment, the Eastern Highway, if implemented, needs to resolve a number of issues related to environment and land resumption. As pointed out by EPD, an air quality impact assessment with traffic data areas involving both transport and air quality modeling exercises will be required for this new road link.

Constraints

- Development of the Heung Yuen Wai needs to overcome some major problems as follows:
Environment

- The site has largely maintained its rural character and fung shui woods with conservation interest could be found behind the villages. With the development of the proposed Shenzhen Eastern Corridor and the associated traffic (in particular heavy vehicles), there will be major impacts on the area's environment. In particular, with a new cross-boundary control point and subsequent increase in container traffic, the air quality and noise problems would likely be aggravated.

- The site is not flooding prone area under existing condition but the proposed use should be subject to detailed assessment through the Drainage Impact Assessment process.

Water Infrastructure

- According to an initial assessment, if the future developments will incur a total water demand of not more than 5,000m$^3$/day (e.g. small resorts, hostels, tourist attraction points, etc.), upgrading of the existing water supply in the area may be required, e.g. construction of pumping station and service reservoir, and laying of associated water mains. A period of four to five years has to be allowed for planning, designing and carrying out the necessary works.

- If the developments will incur a total water demand of over 5,000m$^3$/day (such as large-scale residential, commercial, industrial, hotel or tourism developments), the existing water supply systems in the northern part of the New Territories will not be able to cope with. Upgrading of the existing water supply systems, including the extension of Ngau Tam Mei Treatment Works and Sheung Shui Treatment Works, construction of pumping stations and service reservoirs as well as extension of trunk water mains and distribution networks, will be necessary. The whole process of planning, designing and carrying out the necessary works may take six to seven years.

Sewerage

- There is no plan to extend the Sewerage Master Plan to the area. In order to protect the water quality of Deep Bay, treated effluent may need to be exported away from the Deep Bay Catchment unless very costly, high-level treatment is used. It is estimated that about eight years would be required for providing the necessary sewage infrastructure, e.g. the construction of one additional sewage treatment plant and connecting sewers in the released area. One additional year will be required if the sewage is to be treated at the existing treatment works because the facilities will need to be upgraded to meet the required standards.
Land requisition

- The proposed development involves private agricultural land and will incur resumption of private properties. Rehousing or compensation needs to be provided for the affected residents.

Vehicular access

- Existing access is via the substandard Lin Ma Hang Road and Ping Che Road, which mainly serve the needs of local villages. Moreover, the inadequate capacities along the road will call for transport improvement for any proposed development at the area.

Topography

- The hilly terrain in the area will limit development within the Heung Yuen Wai area and its further expansion will be confined.
Annex 5

Kong Nga Po

The Site

- The site covers land mainly zoned as “Green Belt” and “Agriculture” on the Fu Tei Au & Sha Ling and Hung Lung Hang OZPs. Pockets of “GIC’ sites are also found within the site.

- Fanling/Sheung Shui New Town located to the southwest of Kong Nga Po (less than 1 km away) includes various residential, commercial, industrial, social, community and recreation facilities. The new town currently accommodates a population of about 240,000.

- To cater for the long-term population growth, there are two new development areas (NDAs) planned in the proximity of Kong Nga Po. One is the Kwu Tung North NDA which will be developed along the Sheung Shui to Lok Ma Chau Spur Line. Another is Fanling North NDA which will be integrated with the existing Fanling/Sheung Shui New Town. These two NDAs (with a total population of about 180,000) will provide new housing land to accommodate further population growth in Hong Kong.

- To the further east of the site is Heung Yuen Wai which has been identified as a potential development area within the FCA. Heung Yuen Wai directly adjoins Shenzhen’s Liantang where the new crossing for Shenzhen Eastern Corridor (mainly for goods/containers vehicles) is located.

- Man Kam To crossing is to the north of the site. If the proposed Shenzhen Eastern Corridor is to go ahead, Man Kam To crossing will likely be used mainly by passenger vehicles. Existing Sandy Ridge Cemetery is located to the immediate northwest of the site. To the south of the site are mainly hilly slope and agricultural land. San Wai/Tai Ling Firing Range is located to the further south of the site (about 1 km away).

Opportunities

- Similar to Heung Yuen Wai, the development potential of Kong Nga Po is contingent upon the development of the Eastern Corridor, a new cross-boundary link to connect with the Wai-Shen (惠深) and Shen-Shan (深汕) Expressways and to form a potential development axis towards the eastern part of Guangdong.

- On the future road network within Hong Kong side, one of the options is to link up the Eastern
Corridor with a new road link passing through Heung Yuen Wai and then Kong Nga Po and connecting with the Fanling By-Pass. Another alternative is to shift the Shenzhen’s proposed crossing point from Liantang to Luofang (羅芳) and links up with the Hong Kong’s road network via Kong Nga Po. Notwithstanding that, the preferred crossing points and how Hong Kong’s road network could link up with the Eastern Corridor will be subject to detailed studies.

Constraints

- Development of Kong Nga Po needs to overcome some major problems as follows:-

Environment

- The site has largely maintained its rural character and fung shui woods with conservation interest could be found behind the villages. With the development of the proposed Shenzhen Eastern Corridor and the associated traffic (in particular heavy vehicles), there will be major impacts on the area's environment. In particular, with a new cross-boundary control point and subsequent increase in container traffic, the air quality and noise problems would likely be aggravated.

- The site is not flooding prone area under existing condition but the proposed use should be subject to detailed assessment through the Drainage Impact Assessment process.

Water Infrastructure

- According to an initial assessment, if the future developments will incur a total water demand of not more than 5,000m³/day (e.g. small resorts, hostels, tourist attraction points, etc.), upgrading of the existing water supply in the area may be required, e.g. construction of pumping station and service reservoir, and laying of associated water mains. A period of four to five years has to be allowed for planning, designing and carrying out the necessary works.

- If the developments will incur a total water demand of over 5,000m³/day (such as large-scale residential, commercial, industrial, hotel or tourism developments), the existing water supply systems in the northern part of the New Territories will not be able to cope with. Upgrading of the existing water supply systems, including the extension of Ngau Tam Mei Treatment Works and Sheung Shui Treatment Works, construction of pumping stations and service reservoirs as well as extension of trunk water mains and distribution networks, will be necessary. The whole process of planning, designing and carrying out the necessary works may take six to seven years.
Sewerage

- There is no plan to extend the Sewerage Master Plan to the area. In order to protect the water quality of Deep Bay, treated effluent may need to be exported away from the Deep Bay Catchment unless very costly, high-level treatment is used. It is estimated that about eight years would be required for providing the necessary sewage infrastructure, e.g. the construction of one additional sewage treatment plant and connecting sewers in the released area. One additional year will be required if the sewage is to be treated at the existing treatment works because the facilities will need to be upgraded to meet the required standards.

Land requisition

- The proposed development involves private agricultural land and will incur resumption of private properties. Rehousing or compensation needs to be provided for the affected residents.

Vehicular access

- Existing access is via the Man Kam To Road which needs to be further improved for any proposed development at the area.

Topography

- The hilly terrain of the area (about 40% of land with 20m contour or above) will call for site formation work.
Annex 6

Preliminary ideas of the proposed Trade Expo in LMC Loop

Functions of the Trade Expo

- To help Mainland firms to reach out to the world by providing a window for the 31 Mainland provinces/autonomous regions/municipalities directly under the Central Government (especially those in the inner regions) to set up permanent exhibition areas and representative offices to attract foreign investment as well as to promote their own products especially products produced by medium and small firms and firms run by private enterprises to the overseas market;

- To help foreign companies to enter Mainland markets by providing a springboard for the international firms to establish their own showrooms or bases for Mainland sourcing activities;

- To provide one-stop professional services such as legal, banking and accounting services and by making use of Hong Kong’s existing civil law system for contract execution or subsequent arbitration for the business transactions undertaken there;

- To provide opportunities for the Mainland or overseas companies especially these small and medium-sized firms to organise thematic or topical exhibition activities e.g. machinery, furniture or agricultural products in the large-scale outdoor and indoor exhibition area within the Trade Expo;

- To provide economic spin-offs to Shenzhen, in terms of increasing demand for commercial/office uses, lodging and catering facilities and stimulating tourist development and to provide a land use development that is compatible with the town centre development of Futian area which is opposite to the Trade Expo; and

- To provide different convention facilities in Hong Kong and other PRD cities in that the proposed trade expo is a permanent establishment for Mainland provinces cities to attract foreign investment or foreign companies to invest in the Mainland markets. It would allow easy access for Mainlanders (permit free) to visit and work in the area. At the same time, foreigners and Hong Kong people could easily enter the area and make use of the “windows” of various Mainland provinces/regions/cities set up there to carry out their Mainland trade.
Interface with Other Exhibition Facilities

- At present, different cities have developed or would further develop convention and exhibition facilities for promotion of different trading activities. For example, Shenzhen is proceeding with the development of a new convention centre in Futian (with a GFA of about 250,000m²) and Guangzhou has recently completed phase 1 of a new convention centre in Pazhou (with a total GFA of about 700,000m²). Airport Authority is also planning to develop convention facilities at the Chek Lap Kok Airport (with a GFA of about 110,000m²) making use of the convenient and strategic location of the airport.

- Given the aforesaid development, we need to make use of the locational advantages of the FCA for the development of trade expo which would attract those trading and business activities (for example, the small and medium-sized firms operated by Mainland’s private entrepreneurs) related to the Mainland and Hong Kong as well as provide Hong Kong’s professional services. In addition, this proposal will also target at the promotion of the Chinese product and enable those cities and provinces of inner region to attract foreign investment. Large-scale indoor and outdoor exhibition area would be incorporated as part of the development. Periodic thematic exhibitions would be convened to promote trading activities between Mainland and other overseas countries. In association with the convention and exhibition development, hotel and accommodation facilities would be planned to enhance the attraction of the whole development.

- In addition, office block could be provided to enable different provinces and cities within the Mainland to set up their own economic and trade offices in the Loop as a window to attract foreign investment. In particular, the Mainland inland provinces and cities could be attracted to join the proposed trade expo with a view to making use of Hong Kong as a gateway to the international market. The LMC Loop, being located within the boundary of the HKSAR, will particularly have the attraction because conducting business and signing agreement here could take the advantage of the concentration of Hong Kong legal and other professional services. In parallel, Hong Kong professional firms (including accounting, insurance, banking and legal) could establish their offices there rendering professional services to the cross-boundary business activities.

- Conceptual drawings of the proposed trade expo at the Loop are at Plans 12-15
Frontier Closed Area

Shenzhen
Deep Bay
Sheung Shui
Fanling
Tai Po
Shatin
Tuen Mun
Lantau Island
Hong Kong Island

LEGEND 圖例

Existing Frontier Closed Area
Development Constraints in Frontier Closed Area - Lo Wu to Sha Tau Kok

Date 日期： 19/07/2004
Existing and Proposed Transportation Linkage of Frontier Closed Area
Recognized Villages
Planned Land Uses in the Vicinity of the Frontier Closed Area
Urban Structure of Shenzhen
Potential Areas in Frontier Closed Area
Trade Expro in Lok Ma Chau Loop - Conceptual Drawing
Trade Expro in Lok Ma Chau Loop - Conceptual Drawing
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