

1. Introduction

This Working Paper No. 6 (WP6) presents a comprehensive land use framework under the Recommended Development Plan (RDP) which is based on the results of the Stage 2 Community Engagement Activities, Working Paper No. 5 (WP5) Draft Development Plan (DDP), Working Paper No. 4 (WP4) Broad Technical Assessments and the Strategic Environmental Performance Report (SEPR). The RDP will provide the preparation of statutory plans. Although similar to the DDP, the RDP is final representation of the Study and includes the public comments of the Stage 2 Community Engagement process as well as the continued input from relevant stakeholders and government departments.

2. Community Engagement

A comprehensive two-stage community engagement program was adopted to proactively engage the community in the planning of the Study Area throughout the study process. The Stage 1 Community Engagement Activities were conducted between May and August in 2008 and the outcome had been incorporated into the First Stage Community Engagement Report. The public showed in-principle support to the vision and themes, although there were diverse views on the balance between conservation and development. The Stage 2 Community Engagement Activities were conducted between 30 October and 31 December in 2009, which included about 15 briefings/presentations and two half-day public forums (Tun Yu School in San Tin and Luen Wo Hui Community Hall in Fanling on 7 November 2009 and 28 November 2009 respectively). The main objectives were to present the DDP to the public with a view to building a balanced consensus on the future conservation and development of the Study Area. A total of thirty-seven written submissions were received. A summary of the public comments and written submissions made during the engagement process was included in the Stage 2 Community Engagement Report. The majority of public opinions and comments generally agreed that the proposals of the DDP were in the right direction to achieve a proper balance between development and conservation under the principle of sustainable development. Nevertheless, some concerns were raised on the minimal amount of development which may not be conducive to enhancing the linkage with Shenzhen; the unfair designation of private land as “Green Belt” (“GB”) or “Conservation Area” (“CA”); the possible intrusion of unauthorized development; the impact of the release of the existing Closed Area on the natural environment; and the provision of more land designated for village development.

3. Land Use Framework

3.1 Strategic Context

Areas immediately adjacent to the Study Area in Shenzhen, including the core commercial and business areas in Futian and Luohu districts, are highly urbanized. Adjacent areas in Hong Kong are also being planned for urban expansion under the North East New Territories New Development Areas (NENT NDAs) Study and LMC Loop Study. In contrast, vast areas of the Study Area remain undisturbed and are ecologically and environmentally sensitive. Notwithstanding, the Study Area occupies a strategic boundary location, and has clear advantage in strengthening cooperation between Hong Kong and Shenzhen and bringing mutual benefits to both cities.

The Study Area is proposed to function as a “Green Area” between the two cities. The green development zone will provide an essential visual relief, and minimise the effect of urban heat island between the urban areas of the New Territories and Shenzhen. Key ecological areas in the eastern and western portions of the Study Area are protected under the land use framework. At the same time, the green development zone will become vibrant with heritage and eco-tourism, leisure farming, recreational activities and low-rise residential developments of a scale appropriate to the rural setting and landscape. With the proposed hiking trails and cycling tracks, the public could enjoy and appreciate this formerly isolated part of Hong Kong. Several Development Corridors linking Shenzhen with the NDAs and new towns in the New Territories adjacent to the existing and planned BCPs will provide new opportunities for development to capitalise on the strategic location.

The HK2030 Study recommended to implement the two NDA schemes in the New Territories, to continue with the study on the land use of the LMC Loop, and to study LT/HYW BCP and associated connecting roads. The proposals of the Study are in line with the HK2030 Study in that priority development areas will be in the NDAs, and vacant and under-utilised land in the urban areas and new towns. Excessive development in the Study Area should be avoided to prevent urban sprawl. However, the land use framework could be re-examined in future taking into account any changing long-term development needs.

3.2 Vision

The vision of this Study is to promote the protection and conservation of environmental and cultural heritage resources while making provision for appropriate and sustainable land uses or development. In this regard, the land use framework integrates land use proposals that enhance conservation, while promoting appropriate development to enhance the livelihood of local residents and prosperity of local economy.

3.3 Theme 1 – Strengthen Nature Conversation

Country Park

The potential Country Park at Robin's Nest, including the Lin Ma Hang (LMH) Lead Mines Site of Special Scientific Interest (SSSI), reflects the biological and conservation value, as well as the recreational potential of this area. The proposal would also enhance economic activity within nearby villages where supporting commercial and tourism uses could be promoted.

Ho Sheung Heung Egrettry (HSH Egrettry)

The proposed land use framework for HSH Egrettry will protect the nesting and feeding areas, and restrict any further development in the immediate vicinity that will disturb the habitat and flightlines. "CA" is considered appropriate to provide the necessary protection. Adjacent areas within the flight paths are proposed as "GB" to limit any further disturbance by containing existing development and adopting a general presumption against any further development.

Lok Ma Chau Ecological Corridor

The narrow strip of fishponds adjacent to the southern boundary of the LMC Loop forms an important ecological corridor linking Hoo Hok Wai and other wetland in the Deep Bay area. The proposed land use provision is to retain the area as "CA" but slightly extended to merge with the "CA" under the San Tin Outline Zoning Plan (OZP).

Hoo Hok Wai (HHW)

The recommended land use designation for HHW is "Comprehensive Development and Wetland Enhancement Area" ("CDWEA") to primarily conserve and enhance the ecological value and functions of the existing wetlands, while also allowing consideration of small-scale development proposals under the private public partnership approach subject to detailed environmental assessments and commitment of long-term management and maintenance plans. Any proposals for development within this area should be subject to the scrutiny of the Town Planning Board (TPB).

However, in view of its large area (240 ha), fragmented land ownership and the difficulties in implementation of a comprehensive development, a further study is recommended to examine the potential for development in HHW before a designated zoning is adopted in the statutory plan.

Protection of SSSI

Measures to further strengthen the protection of the LMH Stream SSSI are proposed. In addition to the existing SSSI designation of the LMH Stream, the riparian corridor of the LMH Stream should also be protected.

Although existing administrative measures are in place to ensure that any development in the vicinity of the stream should be subject to the scrutiny of relevant Government departments, it is recommended that a 20m buffer should be considered to be included in the statutory town plans for effective protection of the LMH Stream.

Agricultural Land

Suitable land, including active agricultural land, is designated for agricultural purposes and is typically on the low-lying, flatter areas and around traditional villages. The proposed land use designation and initiatives for rehabilitation of fallow agricultural land can also integrate with other environmental, tourism, recreation and commercial proposals under the Study. This can also assist in preserving the traditional setting of the villages.

Landscape Features

Hilly terrain, natural landscape areas, environmental and aesthetic features that contribute to scenic and environmental quality of the area are recommended to be preserved as “GB” to define the limits of urban and sub-urban development areas. The permitted burial grounds for indigenous villagers will also be designated as “GB”, as appropriate.

Fung Shui Woodland (FSW)

The proposed land use designation for FSW, including “GB” & “CA”, was based on their importance in terms of ecological significance, cultural significance, structural integrity and degree of human disturbance.

3.4 Theme 2 – Conserve Cultural Heritage Resources

Point-Line-Surface

Features of cultural heritage value are broadly grouped together with other land use proposals including leisure farming, recreation and tourism development and adaptive reuse of the vacant schools. A hiking trail with a heritage theme is also proposed to link up clusters of heritage features in order to attract more tourists and provide more incentives to conservation and revitalization. Heritage themes can be incorporated into the existing hiking trails, which can link up buildings, attractions and building clusters with cultural heritage value and can be integrated with villages endowed with cultural characteristics and agricultural activities to promote cultural tourism and boost the local economy. The existing hilly terrain, woodland and cemeteries can be conserved as green belts for preserving the traditional rural landscape and the living space of villages.

Hiking Trail/Cycling Tracks

A hiking trail (approx. 30km), which mainly aligns with existing footpaths, is recommended to connect Mai Po and San Tin in the west to the areas around Sha Tau Kok and Starling Inlet in the east to link key historical villages, built heritage resources and ecological/landscape resources. A key component of the hiking trail is the integration of a heritage theme. Cycling tracks connecting to existing and planned cycling network in Northern New Territories are also proposed to enhance recreation and tourism potential.

3.5 Theme 3 – Promote Sustainable Uses

Kong Nga Po Comprehensive Development Area

The proposed development on the existing formed site of approximately 7 hectares will be subject to a maximum plot ratio of 1.5 and a building height of 3 to 6 storeys. A “Comprehensive Development Area” zoning which requires TPB approval of the proposed development is recommended. Initiatives for sustainable/green measures have been recommended to promote the development as a show-case for new sustainable living in Hong Kong.

Eco-Lodge at Ma Tso Lung

Overlooking the vast area of fishponds and wetland at HHW, the proposed eco-lodge will be the first of its kind in the territory. The proposal aims at providing secluded resort-type accommodation for eco-tourists. A plot ratio of 0.1 to 0.2 and a height restriction of 6m are proposed on a site of 14 hectares, having regard to the natural landscape, topographical and environmental factors. A sustainable development will be promoted through building design and energy saving features and the visual, environmental and ecological impacts on the surrounding areas will be minimised. A set of guidelines that may be applied to wider-Hong Kong has been drawn up to assist in the development of similar proposals in other areas.

Village Development

Areas of land considered suitable for village development are recommended for “Village Type Development” (“V”) under the RDP. Commercial and retail uses on the ground floor may be provided in support of tourism, leisure and recreation facilities. Provisions are also recommended to allow overnight accommodation (Bed & Breakfast (B&B)) in the New Territories Exempted Houses (NTEH) through planning applications to support other tourism and recreation initiatives in the Study Area.

Lok Ma Chau Development Corridor (LMCDC)

Suggestions under this Study include commercial, shopping and entertainment uses of appropriate scale that is compatible with the character of the area to complement the development of the LMC Loop. The land uses alongside the supporting infrastructure to be proposed in areas adjoining the LMC Loop in Hong Kong will be reviewed by the ongoing LMC Loop Study.

Man Kam To Development Corridor (MKTDC)

The southern side of Man Kam To Road was identified as a possible development corridor. The planning intention for the area is for high-tech and creative industries in addition to cross-boundary trade and logistic uses. The recommended plot ratio is 0.4 with a maximum building height of 9m and provisions to protect the secondary woodland in the area.

Hung Lung Hang Residential Area

A small area (approximately 10 hectares) east of the proposed Kong Nga Po Comprehensive Development Area is dominated by open storage and other uses which have an adverse impact on the local setting. The planning intention is to phase out such uses through redevelopment to low-density residential uses. A maximum plot ratio of 0.75 and a maximum building height of 4 storeys are proposed.

Recreation Areas

Three areas in proximity to Pak Fu Shan, Fung Wong Wu and Tong To were identified for recreational uses. The planning intention is to promote nature-based recreational activities, low-scale accommodation, agri-tourism and eco-tourism that does not detract from the natural, historic or rural settings in the area.

3.6 Others

Sandy Ridge Cemetery

The existing Sandy Ridge Cemetery was identified as having potential for cemetery related uses such as crematorium, columbarium and other funeral facilities to meet the growing territorial demand. “Other Specified Use” annotated “Cemetery” (“OU (Cemetery)”) is recommended to be an appropriate zoning for the area.

Liantang/Heung Yuen Wai BCP (LT/HYW BCP)

The designated location for the LT/HYW BCP and its connecting road was identified under separate planning studies and reflected on the RDP.

Disused Schools

Adaptive reuse is proposed for four disused schools, namely, 1) Lung Kai Public School (in *Ma Tso Lung*) 2) Sam Wo Public School (near *Muk Wu Nga Yiu*) 3) King Sau Public School (in *Lin Ma Hang*) and 4) Kwan Ah Public School (in *Tam Shui Hang*), which may be turned into uses such as a small scale holiday camp, visitor/information centre for agri-/eco-tourism, or folk museum. All such uses can be accommodated under the recommended “GIC” zoning.

3.7 Recreation and Tourism Concept

Given the unique environmental, cultural and landscape features, the Study Area was identified as a destination for tourists and local visitors looking for cultural tourism, eco-tourism, leisure farming and recreational activities.

The existing natural resources can be utilised to promote sustainable agri- and eco-tourism. For example, the Eco-lodge proposed in Ma Tso Lung can provide high quality accommodation overlooking the HHW wetlands and scenic rural settings of the Ma Tso Lung area. The vacant schools can be turned into a tourism/visitor centre/holiday camp/folk museum or other recreational uses. The existing hiking trails can be connected to natural attractions (including wetlands, egret, and Fung Shui woodlands) and cultural heritage (including villages endowed with cultural characteristics and agricultural activities). The local villages may become major activity centres accommodating local businesses, such as shops, cafés, rural restaurants, harvest sales, village markets, local tour offices and B&B. Potential outdoor recreational uses, such as horse riding, camping, pet training and adventure games, may also be accommodated at suitable locations such as Heung Yuen Wai and Ta Kwu Ling.

This land use framework will present realistic and comparatively low-cost opportunities for villagers and landowners to actively participate in enhancing the local economy, and to create a sense of community for the existing local residents within the Study Area. A future Tourism Study (TS) has been suggested to further investigate the tourism potential.

3.8 Transport and Infrastructure

It is estimated that the existing road network can generally support the future traffic demand. The Government will provide infrastructure facilities and improve the rural environment. For example, improvements will be made to the existing Man Kam To, Lin Ma Hang Road and some rural roads.

3.9 Strategic Environmental Performance

The implications of the proposed developments have been reviewed under the SEPR to give a broad appreciation of the predicted changes in environmental conditions.

4. Recommended Development Plan (RDP)

4.1 Development Concept

Since the Eastern and Western Portions of the Study Area are endowed with natural and ecological assets, the RDP for these portions mainly focuses on conservation and recreation. The Western Portion, being close to the LMC Loop, is suitable for developing cross-boundary services uses. The Middle Portion, scattered with villages of rich cultural heritage and agricultural land, can focus on promoting leisure farming and cultural tourism and fostering developments that would capitalize on its boundary location.

4.2 Western Portion

The Western Portion covers areas from Mai Po to Lo Wu comprising extensive wetland/fishponds of ecological value in Mai Po, San Tin and HHW, hilly terrain in Lok Ma Chau, Ma Tso Lung and Tai Shek Mo. Hence, the proposals for this portion are primarily to strengthen nature conservation, eco-tourism and cross-boundary uses.

The key opportunities are to conserve the integrity of the ecological values of the fishpond/wetland system whilst the extensive area of agricultural land will provide opportunities for environmentally-friendly farming practices to promoting agri-tourism and eco-tourism. The historical villages of Lok Ma Chau, Liu Pok and LMC Police Station will become primary entry points for the recreation and tourism attractions. With regard to the area in proximity to LMC BCP and the future development of LMC Loop, there is potential for development of an appropriate scale in less sensitive areas to the south of LMC BCP. The land use proposal is under investigation in the LMC Loop Study.

Developments of an appropriate scale that would avoid/minimize adverse environmental impact and would respond to constraints (such as physical topography that restricts major development, limited access and infrastructure, PHI Consultation Zone of the Sheung Shui Water Treatment Works, the presence of the Lo Wu Classification Range and burial grounds, and the possibility of natural terrain landslide hazards) are recommended. Besides, there are different environmental pollution sources, such as Shenzhen River and Binhe Sewage Treatment Works in Shenzhen possibly generating odour problems; LMC BCP possibly causing adverse air and noise impacts; helipad, Lo Wu Classification Range, LMC Rail Station and Spur

Line, likely resulting in noise problems; potential increase in future road traffic likely giving rise to adverse air and noise quality impacts.

The planning intention is to protect the wetland/fishponds and surrounding areas including the hilly terrain and woodland which are suitable for recreation, hiking and bird-watching activities. The LMDC to the south of the Study Area may have potential for future development subject to the review of land uses alongside the supporting infrastructure to be proposed in areas adjoining the LMC Loop under the LMC Loop Study.

4.3 Middle Portion

The Middle Portion covers areas from Lo Wu to Heung Yuen Wai including Man Kam To, Kong Nga Po, Lo Shue Ling, Chow Tin Tsuen and Pak Fu Shan. It is scattered with villages with rich cultural heritage and agricultural land. The RDP proposes sustainable agricultural activities, agri-tourism, recreation and cultural tourism as well as provision for suitable residential and cross-boundary uses capitalising on the boundary location.

The scenic quality, cultural heritage resources, agricultural land and good cross-boundary access are the key opportunities. The disused soil borrow area in Kong Nga Po is proposed for comprehensive residential development, while the adjoining area in Hung Lung Hang is recommended for enhancement through low-intensity residential development to phase out incompatible land uses. The good access and proximity to existing developed areas as well as the nearby proposed NDAs will also contribute as key opportunities. The MKTDC is proposed for high-tech and creative industries in addition to cross-boundary trade and logistic uses while the extensive area of flat land between the Ping Che/ Ta Kwu Ling NDA and LT/HYW BCP could provide a future strategic development link between Hong Kong and Shenzhen subject to future planning.

The presence of cemetery/burial grounds, PHI Consultation Zone of the Sheung Shui Water Treatment Works, water pipelines, NENT Landfill, geotechnical difficulties due to hilly terrain, the presence of two 400kV overhead lines, the need to protect graded historic buildings, the need for upgrading of infrastructural facilities development, and the possibility of natural terrain landslide hazards are major development constraints in this portion. Besides, there are different environmental pollution sources, such as Shenzhen River, pig farms and Shenzhen's Luofang Sewage Treatment Works possibly generating odour problems; firing range and helipads possibly resulting in noise impacts; proposed crematorium potentially leading to air pollutant emission; planned LT/HYW BCP and potential increase in future road traffic likely giving rise to adverse air and noise quality impacts.

The planning intention is to preserve and protect the natural setting and cultural resources while allowing for eco-tourism, recreational, residential and cross-boundary related developments.

4.4 Eastern Portion

The Eastern Portion covers areas from Heung Yuen Wai to Sha Tau Kok including LMH, San Kwai Tin and Pak Kung Au. It is dominated by hilly terrain at Robin's Nest and endowed with rich natural and ecological resources. The proposals of the RDP focus on conservation and recreation.

The key opportunities include high landscape and environmental/ecological value, cultural heritage, visual setting and potential for recreation and tourism development, as well as its proximity to Sha Tau Kok. The land use pattern will also promote the traditional villages as key entry points and tourism nodes to support the recreational development in the immediate area and land designated for agricultural purposes.

However there are several development constraints including the need to protect heritage and natural ecological features such as the hilly terrain in Robin's Nest, the LMH Stream SSSI and the LMH Lead Mines SSSI; the potential terrain/geotechnical difficulties, limited access and infrastructure, the presence of the Landfill Gas Consultation Zone of NENT Landfill and its extension, the presence of seasonally wet grassland, the need to protect water quality and the presence of burial grounds. Besides, there are different environmental pollution sources, such as Shenzhen River and Sha Tau Kok Sewage Treatment Works possibly generating odour problems; helipads likely resulting in noise impacts; Sha Tau Kok BCP and potential increase in future road traffic likely giving rise to adverse air and noise quality impacts.

The planning intention is to protect the natural setting, environmental diversity and rural landscape while allowing recreation and tourism development. The land use proposals identified Robin's Nest as a potential country park for the protection of its important wildlife habitats, natural landscapes and its surrounding woodlands as well as LMH Lead Mines SSSI and the ecological corridor between Pat Sin Leng and Wutungshan. With hiking trail and cycling track linking up the ecological and cultural heritage resources and possible reuse of the vacant schools for tourism/recreation, the historic villages and the surrounding agricultural land can be integrated to attract tourists.

4.5 Overview

In terms of land use disposition, a broad land use budget has been prepared and is provided in **Table 4.1**. The table gives a general picture that the majority of land uses (approx. 1484ha or 56.2%) have been allocated to conservation zones or zones that have a general presumption against development. This is primarily due to the large areas of environmental significance (e.g. wetlands/fishponds and Robin's Nest) and hilly terrain within the Study Area. Another 36.8% (approx. 973ha) was identified for eco-lodge, low-density residential development, development corridors, agricultural and recreational purposes which will assist in maintaining the rural character, protecting the setting of heritage villages and providing low-scale uses that will promote recreational, tourist and economic activities in the Study Area in line with the overall planning vision. The land use budget provides a good reflection of the consistency between the land use framework and the Study vision.

The RDP, which provides a study-wide appreciation of the land use framework recommended in this Study is shown in Figure 2. It also provides the basis for the preparation of the statutory town plans for the area.

| Land Use | Area (approx. ha) | % of Study Area |
|------------------------------|-------------------|-----------------|
| AGR | 306 | 11.6% |
| CA | 212 | 8.0% |
| CP | 476 | 18.0% |
| Eco-lodge | 14 | 0.5% |
| GB | 795 | 30.1% |
| GIC | 31 | 1.2% |
| Major Roads/Railway | 19 | 0.7% |
| OU (CDWEA) | 326 | 12.3% |
| OU (Cemetery) | 91 | 3.5% |
| OU (Cross Boundary Services) | 40 | 1.5% |
| Residential | 11 | 0.4% |
| OU (LT/HYW BCP) | 23 | 0.9% |
| OU (Cement Plant) | Less than 1 | Less than 0.1% |
| Recreation | 153 | 5.8% |
| CDA | 15 | 0.6% |
| River/Stream | 21 | 0.8% |
| SSSI | Less than 1 | Less than 0.1% |
| Village | 107 | 4.1% |
| Total | 2642 | 100.00% |

Table 4.1 Summary of Land Use

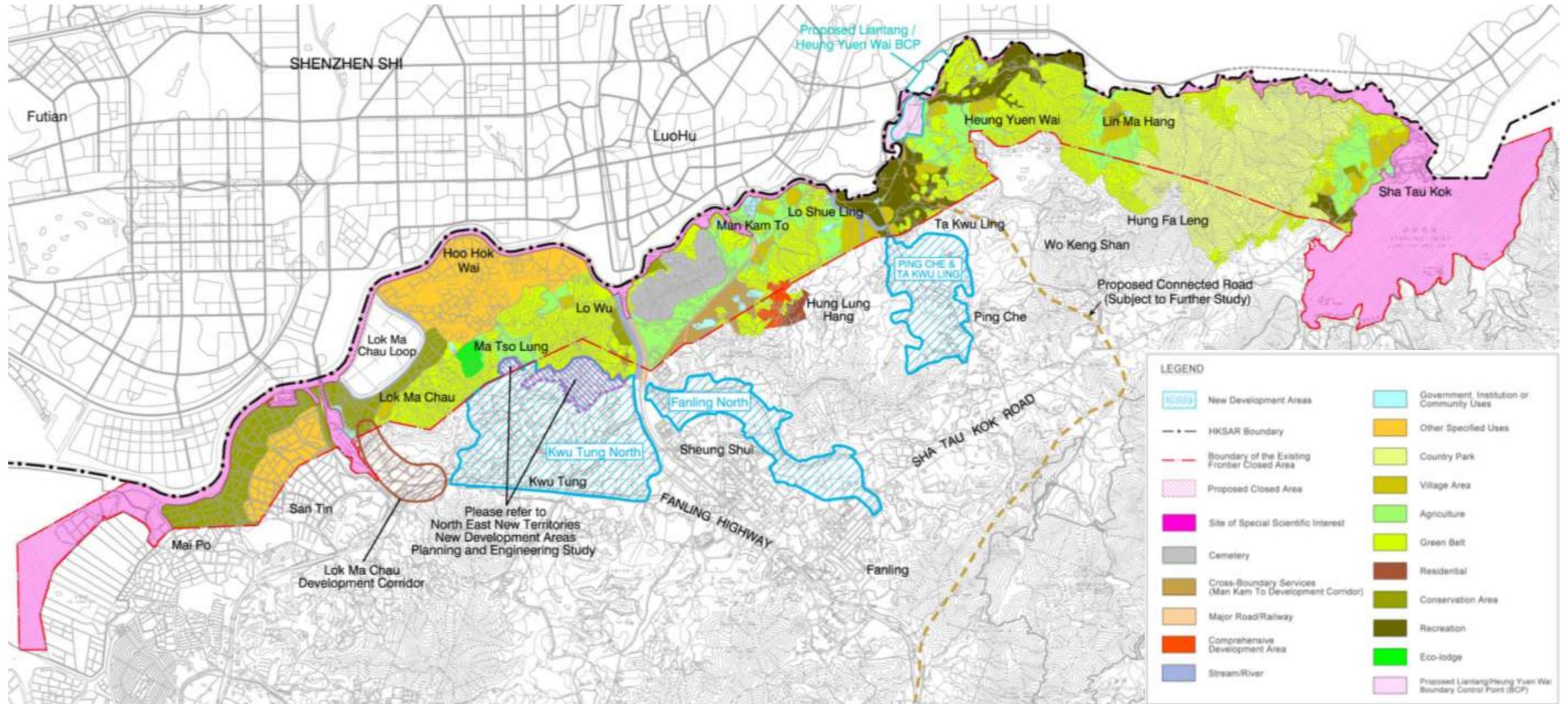


Figure 1 - Recommended Development Plan (RDP)

5. Implementation

The proposed land use framework will provide a basis for the preparation of statutory town plans before the opening up of the existing Closed Area. The Government will consider appropriate traffic management measures taking into account the road conditions and the anticipated traffic flow. The Government will also provide the necessary upgrading of infrastructural facilities and services (e.g. road improvements to Man Kam To Road, LMH Road and some village access roads).

In line with the planning intention and the land use framework proposed on the RDP, the Government will encourage private sector participation in taking forward the development proposals, including the Eco-lodge in Ma Tso Lung, Kong Nga Po Comprehensive Development Area, Hung Lung Hang Residential Area, the Development Corridors for cross boundary services, and development of recreation and leisure farming in agricultural land.

Government will also encourage heritage conservation of privately owned properties by supporting revitalization scheme and providing financial assistance through existing initiatives.

6. Way Forward

The RDP provides the recommended land use framework and planning guidelines for future development within the Study Area to be considered in the formulation of relevant statutory town plans. Formulation of the Statutory Plans will now be undertaken by the Planning Department and will follow the statutory procedures including the publication of the draft plans for public inspection.