Programme No. 3012GB
Construction of a Secondary Boundary Fence and new sections of Primary Boundary Fence and Boundary Patrol Road

Project Profile

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Issue and Revision Record

Rev	Date	Originator	Checker	Approver	Description
A	Sept 06	Various	AFK	TMC	Draft
B	Feb 08	Various	AFK	TI	Draft
C	Apr 08	Various	AFK	TI	Formal Submission

E. EXECUTIVE SUMMARY

E.1 Background

The Frontier Closed Area (FCA) is an integral part of the package of measures for maintaining the integrity of the Hong Kong SAR's boundary with the Mainland and for combating illegal immigration and other cross-boundary criminal activities. Following a recent review, the Government has concluded that with the erection of a secondary boundary fence (SBF) along the boundary patrol road (BPR) and construction of new sections of the BPR and primary boundary fence (PBF) at certain sections along the boundary, the FCA coverage can be substantially reduced without affecting the objective of maintaining the integrity of the boundary. The PBF and SBF will be erected along the northern and southern curbs of the realigned BPR respectively to facilitate the Police in combating cross-boundary criminal activities. The reduced FCA will comprise a narrow strip of land covering the realigned BPR and areas to its north, together with the points of crossing the boundary (i.e. the Boundary Control Points and Sha Tau Kok town). Areas south of the SBF will generally be excised from the FCA.

E.2 Scale of the Project

The Project mainly comprises the construction of an SBF along the southern edge of the existing BPR (approximately 21.7km) from west (Pak Hok Chau) to east (Sha Tau Kok). For sections where the existing PBF runs along the southern edge of the BPR, a new fence with sensor alarm system will be constructed on the northern edge of the BPR as part of the PBF whereas the existing PBF will become the SBF. The project also includes the conversion of the existing maintenance services road along the Shenzhen River bank to the north of the Lok Ma Chau Loop and Hoo Hok Wai into a new section of the BPR with a PBF and an SBF; and construction of two new sections of the BPR with a PBF and an SBF along the Shenzhen River side to the north of Pak Fu Shan and northwest of Lin Ma Hang Village. In addition, the Project includes the construction of a checkpoint at the entrance to the Sha Tau Kok town (i.e. location of "Gate One") and replacement of the existing checkpoint at Pak Hok Chau, removal of the existing checkpoints at Lok Ma Chau, Sha Ling, Ping Che and Shek Chung Au, and removal of the existing PBF along those sections of the existing BPR which will be replaced by new sections of the BPR.

E.3 Planning and Implementation Programme

The Project is planned and designed by Consultant appointed by Architectural Services Department (ArchSD). The works will be implemented by the Contractors appointed by ArchSD and the first Construction Contract is expected to be awarded in late 2009. The construction works are expected to commence in late 2009 for completion in late 2012.

E.4 Review Findings

For the preparation of the Project Profile, the consultant has carried out environmental reviews to determine the key environmental issues associated with the construction works of the Project. The works would generate short-term impacts in terms of air quality, noise, waste, water quality, ecology, and landscape and visual during construction. These impacts can be controlled to acceptable levels by putting in place appropriate mitigation measures.

Air Quality : With mitigation measures, air quality impacts resulting from the construction works of the Project are not anticipated to exceed air quality criteria or to be significant to air sensitive receivers.

Noise : Short-term noise resulting from the proposed fence works is anticipated on sensitive receivers during construction. After implementing mitigation measures such as the use of quiet plant and erection of vertical noise barrier, the noise impacts could be reduced to an acceptable level.

Waste : Off-site waste disposal will be avoided as far as practicable. This is to be achieved by avoiding and reducing waste generation in the first instance. In addition, materials will be reused where possible.

Water : The adjacent natural rivers, streams and fish ponds will be protected from adverse impacts arising from the Project. With the implementation of appropriate control measures and following good site practices, adverse water quality impacts are not anticipated.

Ecology : The major anticipated impacts are the permanent loss of habitat, temporary loss of habitat and temporary disturbance to fauna species. Upon the completion of construction works, mitigation measures such as revegetation areas of temporary vegetation loss and compensation planting will be put in place to minimise the habitat loss. Mitigation measures including appropriate construction practices (e.g. restriction of construction areas, etc) and phasing of construction works in ecological sensitive areas will be implemented. The ecological impacts could be reduced to an acceptable level.

Landscape and Visual : The construction works of the Project may result in loss of some trees. Tree transplantation or tree compensation will help minimize the landscape and visual impacts. Permanent landscape and visual impacts arising from the project are not anticipated.

Cultural Heritage : Long-term adverse impacts are not anticipated, as they will be protected from the construction works by appropriate mitigation measures.

Summary : The impacts associated with the construction and operation of the boundary fences and the new sections of the boundary patrol road are acceptable.

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1. BASIC INFORMATION

1.1 Project Title

Programme No. 3012GB - Construction of a Secondary Boundary Fence and new sections of Primary Boundary Fence and Boundary Patrol Road

1.2 Purpose and Nature of the Project

The Frontier Closed Area (FCA) is an integral part of the package of measures for maintaining the integrity of the Hong Kong SAR's boundary with the Mainland and for combating illegal immigration and other cross-boundary criminal activities. Following a recent review, the Government has concluded that with the erection of a secondary boundary fence (SBF) along the boundary patrol road (BPR) and construction of new sections of the BPR and primary boundary fence (PBF) at certain sections along the boundary, the FCA coverage can be substantially reduced without affecting the objective of maintaining the integrity of the boundary. The PBF and SBF will be erected along the northern and southern curbs of the realigned BPR respectively to facilitate the Police in combating cross-boundary criminal activities. The reduced FCA will comprise a narrow strip of land covering the realigned BPR and areas to its north, together with the points of crossing the boundary (i.e. the Boundary Control Points and Sha Tau Kok town). Areas south of the SBF will generally be excised from the FCA.

The Project mainly comprises the construction of an SBF along the southern edge of the existing BPR (approximately 21.7km) from west (Pak Hok Chau) to east (Sha Tau Kok). For sections where the existing PBF runs along the southern edge of the BPR, a new fence with sensor alarm system will be constructed on the northern edge of the BPR as part of the PBF whereas the existing PBF will become the SBF. The project also includes the conversion of the existing maintenance services road along the Shenzhen River bank to the north of the Lok Ma Chau Loop and Hoo Hok Wai into a new section of the BPR with a PBF and an SBF; and construction of two new sections of the BPR with a PBF and an SBF along the Shenzhen River side to the north of Pak Fu Shan and northwest of Lin Ma Hang Village. In addition, the Project includes the construction of a checkpoint at the entrance to the Sha Tau Kok town (i.e. location of "Gate One") and replacement of the existing checkpoint at Pak Hok Chau, removal of the existing checkpoints at Lok Ma Chau, Sha Ling, Ping Che and Shek Chung Au, and removal of the existing PBF along those sections of the existing BPR which will be replaced by new sections of the BPR.

1.3 Name of Project Proponent

Security Bureau (SB) is the project proponent. Police is the end-user of the boundary fences and the realigned BPR. Architectural Services Department (ArchSD) is the works agent and is responsible for the management, planning, design and implementation of the Project.

1.4 Contact Persons

	SB	Police	ArchSD
Name :	Ms Kathy Lee Senior Executive Officer	Mr. Jack Wong Senior Inspector	Mr. Jackle Miu Senior Project Manager
Address :	6/F., Main Wing, Central Government Offices, Lower Albert Road, Central, Hong Kong	Border District Headquarters Man Kam To Road, Sha Ling, New Territories	40/F., Queensway Government Offices, 66 Queensway, Hong Kong
Telephone :	2810 2325	2668 3576	2867 3907

1.5 Location of the Project

The works are mainly located along the existing BPR from west of Pak Hok Chau to east of Sha Tau Kok, the Shenzhen River side at Lok Ma Chau Loop, Hoo Hok Wai, north of Pak Fu Shan and northwest of Lin Ma Hang Village within the FCA. Access to these areas is controlled by Closed Area Permits issued under Section 37(2) of the Public Order Ordinance. The location of the fence alignment, the new sections of BPR, the new checkpoint, the four existing checkpoints to be removed and the replacement checkpoint to be constructed are shown in **Figure 1.1**.

1.6 Scale of the Project

The entire length of the Project is about 21.7km from west of Pak Hok Chau to east of Sha Tau Kok and is divided into four sections as shown in **Figure 1.1**. The project scope of each section is described below.

Section 1 – Mai Po to Lok Ma Chau Control Point

(i) To erect an SBF along the existing BPR (approximately 4.1km); and

(ii) To replace the existing checkpoint at Pak Hok Chau.

Section 2 – Lok Ma Chau Control Point to Ng Tung River

(i) To convert the maintenance services road of Drainage Services Department along the Shenzhen River bank to the north of the Lok Ma Chau Loop and Hoo Hok Wai into a new section of the BPR (approximately 5.6km);

(ii) To erect a new PBF with the sensor alarm system and an SBF respectively along the northern and southern side of the converted road;

(iii) To remove the original PBF and the sensor alarm system thereon along the existing BPR south of the Lok Ma Chau Loop and Hoo Hok Wai; and

(iv) To remove the existing checkpoint at Lok Ma Chau Road.

Section 3 – Ng Tung River to Lin Ma Hang Village

(i) To erect an SBF along the existing BPR except the sections to the north of Pak Fu Shan and northwest of Lin Ma Hang Village (approximately 7.5km);

(ii) To construct new sections of the BPR along the Shenzhen River side to the north of Pak Fu Shan and northwest of Lin Ma Hang Village without necessitating river training (approximately 4.0km);

(iii) To erect a new PBF with the sensor alarm system and an SBF along the northern and southern sides of the new sections of BPR respectively;

(iv) To remove the original PBF and the sensor alarm system thereon along the existing BPR near Pak Fu Shan and Lin Ma Hang Village; and

(v) To remove the existing checkpoints at Sha Ling and Ping Che.

Section 4 – Lin Ma Hang Village to Sha Tau Kok

(i) To erect an SBF from the entrance of the Sha Tau Kok town (i.e. the location of "Gate One") to the Sha Tau Kok Control Point (approximately 0.5km);

(ii) To provide a new checkpoint at "Gate One"; and

(iii) To remove the existing checkpoint at Shek Chung Au.

1.7 Site History and Existing Condition

The existing BPR is primarily fenced off by a boundary fence which runs mainly along the northern side of the BPR. Steep slopes, marshland, fish ponds and private lots are commonly found along the edge of the BPR.

The area along the Shenzhen River bank to the north of the Lok Ma Chau Loop and Hoo Hok Wai is an existing maintenance services road of Drainage Services Department.

The areas at Shenzhen River side to the north of Pak Fu Shan and northwest of Lin Ma Hang Village are rural areas.

1.8 Number and Types of Designated Projects to be Covered by the Project Profile

The Project is a designated project (DP) under Category Q.1, Part I, Schedule 2 of the Environmental Impact Assessment Ordinance (EIAO) (Cap. 499) which reads "All projects including new access roads, railways, sewers, sewage treatment facilities, earthworks, dredging works and other building works partly or wholly in an existing or gazetted proposed country park or special area, **a conservation area**, an existing or gazetted proposed marine park or marine reserve, a site of cultural heritage, and **a site of special scientific interest**....".

2. OUTLINE OF PLANNING AND IMPLEMENTATION PROGRAMME

2.1 Planning and Implementation Programme

The Project is planned and designed by the Consultant appointed by ArchSD. The works will be implemented by the Contractors appointed by ArchSD and the first Construction Contract is expected to be awarded in late 2009. The construction works are expected to commence in late 2009 for completion in late 2012.

3. MAJOR ELEMENTS OF THE SURROUNDING ENVIRONMENT

3.1 Air

Existing Environment

The local traffic such as that from Sha Ho Road, Lin Ma Hang Road and the BPR and other local roads are considered to be the main sources affecting the ambient air quality within the study area and its environs.

3.2 Noise

Existing Environment

Sha Ho Road, Lin Ma Hang Road, BPR and other local roads are the main noise pollution sources at the Study Site.

3.3 Water

Existing Environment

There are rivers/drainage channels (e.g. Shenzhen River, Ng Tung River and Ping Yuen River), streams/ditches (e.g. Lin Ma Hang Stream) and fish ponds adjacent to the works area. Some of these water bodies, especially the downstream of Shenzhen River, are already polluted by industrial discharges. Other potential water pollution sources include the effluent from agriculture activities and the disposal of domestic sewage in the hitherto un-sewered village areas along the proposed fence.

3.4 Ecology

Existing Environment

The area along the existing BPR from Sha Tau Kok to Mai Po comprises various habitats, including inactive/abandoned agriculture land, river and stream, mangrove, woodland, fung shui woodland, shrubland, grassland, marsh and pond. Some villages and developed facilities such as sewage treatment plants are also scattered in the area.

In accordance with the Mai Po and Fairview Park OZP (S/YL-MP/6) and San Tin OZP (S/YL-ST/8), the alignment in Section 1 from Mai Po to Lok Ma Chau Control Point is within the Conservation Area (CA). This area comprises mainly active fish ponds, which provide important feeding ground to wetland bird species. A large patch of freshwater wetland is situated in Hoo Hok Wai and Ta Sha Lok within Section 2, which is also an important habitat to wetland fauna that ecologically links with the adjacent CA.

A very short section of the alignment in Section 3 runs across the downstream of Lin Ma Hang Stream. This stream has been designated as Site of Special Scientific Interest (SSSI) for the rich diversity of freshwater fish and the records of rare fish species.

3.5 Landscape and Visual

Existing Resources

The proposed fence is about 21.7km long extending from the west (Pak Hok Chau) to the east (Sha Tau Kok). This area is remote and generally natural. The existing vegetation includes grassland, shrubland, woodland, plantation, mangrove and mature trees, some of which are high value landscape resources. Other landscape resources comprise hills and peaks, fish ponds, natural rivers and streams.

3.6 Cultural Heritage

Existing Environment

No declared monuments are located within or adjacent to the works area for the Project. However, some graves and burial urns are found along the BPR. These graves and burial urns are in groups or exist individually in the proximity of the works area less than 10m.

4. POTENTIAL ENVIRONMENTAL IMPACTS

The impacts associated with the construction works of the Project are assessed according to the criteria listed in Annexes of the Technical Memorandum on Environmental Impact Assessment Process (TMEIA). The major potential impacts during construction and operation associated with the boundary fences are shown below in **Table 4.1**.

Table 4-1 Major Potential Impacts during Construction and Operation Associated with the Boundary Fence

Potential Impacts		Phase	
		Construction	Operation
Air quality	Dust pollution	✓	×
	Odour pollution	×	×
	Exhaust emissions	✓	×
Noise	Machinery	✓	×
Waste generation	Disposal of spoil	✓	×
	Disposal of refuse	✓	✓
Water quality	Effluents	✓	✓
	Erosion and site runoff	✓	×
Ecology	Impacts on fauna	✓	✓
	Impacts to flora	✓	×
	Habitat loss	✓	×
Landscape and visual amenity	Unsightly visual amenity	✓	×
	Landscape amenity	✓	×
Cultural heritage	Excavation of graves	×	×
	Re-location of shrines	×	×

Notes: ✓= Possible; × = Not anticipated

5. ENVIRONMENTAL PROTECTION MEASURES TO BE INCORPORATED IN THE DESIGN AND ANY FURTHER ENVIRONMENTAL IMPLICATIONS

5.1 Air

The dust control requirements of the Air Pollution Control (Construction Dust) Regulation will be followed to control the dust emission arising from the construction activities. It is expected that dust levels will not exceed air quality criteria with the implementation of the following mitigation measures.

Recommended Mitigation Measures during Construction

- the load on the vehicles should be covered entirely by clean impervious sheeting to ensure that the dusty materials do not leak from the vehicle;
- vehicle speeds limited to 20 kph to reduce the traffic-induced dust dispersion and re-suspension within the site; and
- damping of unpaved roads.

5.2 Noise

It is anticipated that short-term noise impacts from the proposed fence works during construction could be reduced to an acceptable level with the implementation of the mitigation measures.

Recommended Noise Mitigation Measures during Construction

Good site practice and noise management can significantly reduce the impact of construction site activities on nearby noise sensitive receivers (NSRs). The following package of measures should be followed during construction:

- only well-maintained plant should be operated on-site and plant should be serviced regularly during the construction works;
- machines and plant that may be in intermittent use should be shut down between work periods or should be throttled down to a minimum;
- plant known to emit noise strongly in one direction, should be orientated to direct noise away from the NSRs;
- mobile plant should be sited as far away from NSRs as possible; and
- material stockpiles and other structures should be effectively utilised, where practicable, to screen noise from on-site construction activities.

5.3 Waste Management Systems and Practices

Recommended Waste Management Systems and Practices

From an environmental point of view, waste management practices which will be implemented include:

- avoidance and minimisation, i.e. avoid / minimise the waste generation through changing or improving practices and design (e.g. use of special footings);
- reuse of materials at each of the construction sites for landscaping and backfill, etc; and
- recovery and recycling of valuable metals such as the demolished chain link fence.

5.4 Water

Recommended Mitigation Measures during Construction / Operation

Mitigation measures for the construction site drainage can follow the ProPECC PN 1/94 that gives the basic environmental guidelines for the handling and disposal of construction site discharges.

5.5 Ecology

Recommended Mitigation Measures during Construction / Operation

Mitigation measures should be undertaken to reduce direct and indirect impacts, including compensation planting, design considerations, revegetation of areas of temporary vegetation loss, minimization of disturbance to habitat. Phasing of construction works and implementation

of mitigation measures for dust control, noise nuisance and water quality impacts will also minimize the impacts on ecological resources.

5.6 Landscape and Visual

Recommended Mitigation Measures during Construction / Operation

Mitigation measures should be undertaken to reduce the potential landscape and visual impacts. The proposed mitigation measures comprise:

- Tree protection
- Tree transplantation
- Replanting
- Project design

5.7 Cultural Heritage

Recommended Mitigation Measures during Construction / Operation

The cultural heritage resources can be protected by using temporary fence to create buffer zone around the affected resources and using protective covers during the construction.

In the operational phase, no adverse impacts on cultural heritage are anticipated, so no mitigation measures are required.

6. PREVIOUSLY APPROVED EIA REPORTS

This Project Profile utilised information from the following approved EIAs.

- Northeast New Territories (NENT) Landfill Extension EIA Report (2007) (Environmental Protection Department)

- Drainage Improvement in Northern New Territories Package C EIA Report (2007) (Drainage Services Department)

- Improvement to San Tin Interchange EIA (2004) (Highways Department)

- Sheung Shui to Lok Ma Chau Spur Line EIA Report (2002) (Kowloon-Canton Railway Corporation)

- Shenzhen River Regulation Project Stage III EIA (2000) (Drainage Services Department)

7. CONCLUSIONS

7.1 Air

With mitigation measures, air quality impacts resulting from the construction works of the Project are not anticipated to exceed air quality criteria or to be significant to air sensitive receivers.

7.2 Noise

Short-term noise resulting from the proposed fence works is anticipated on sensitive receivers during construction. After implementing mitigation measures such as the use of quiet plant and erection of vertical noise barrier, the noise impacts could be reduced to an acceptable level.

7.3 Waste

Waste management plan and good site practices will be implemented to minimise the waste generation. Off-site waste disposal will be avoided as far as practicable. This is to be achieved by avoiding and reducing waste generation in the first instance. In addition, materials will be reused where possible. With the appropriate mitigation measures, impacts associated with waste are not anticipated in both construction and operational phases.

7.4 Water

The adjacent natural rivers, streams and fish ponds will be protected from adverse impact arising from the Project. The potential impacts may be arisen from site runoff, generated construction wastewater and sewage from site workers. With the implementation of pollution control measures and following good site practices, adverse water quality impacts are not anticipated.

7.5 Ecology

The major anticipated impacts are the permanent loss of habitat, temporary loss of habitat, and temporary disturbance to fauna species. Upon the completion of construction works, mitigation measures such as revegetation areas of temporary vegetation loss and compensation planting will be put in place to minimise the habitat loss. Mitigation measures including appropriate construction practices (e.g. restriction of construction areas, etc) and phasing of construction works in ecological sensitive areas will be implemented. The ecological impacts could be reduced to an acceptable level.

7.6 Landscape and Visual

The construction works of the Project may result in loss of some trees. Tree transplantation or compensation will help minimise the landscape and visual impacts. Permanent landscape and visual impacts arising from the project are not anticipated.

7.7 Cultural Heritage

Long-term adverse impacts are not anticipated, as they will be protected from the construction works by appropriate mitigation measures.

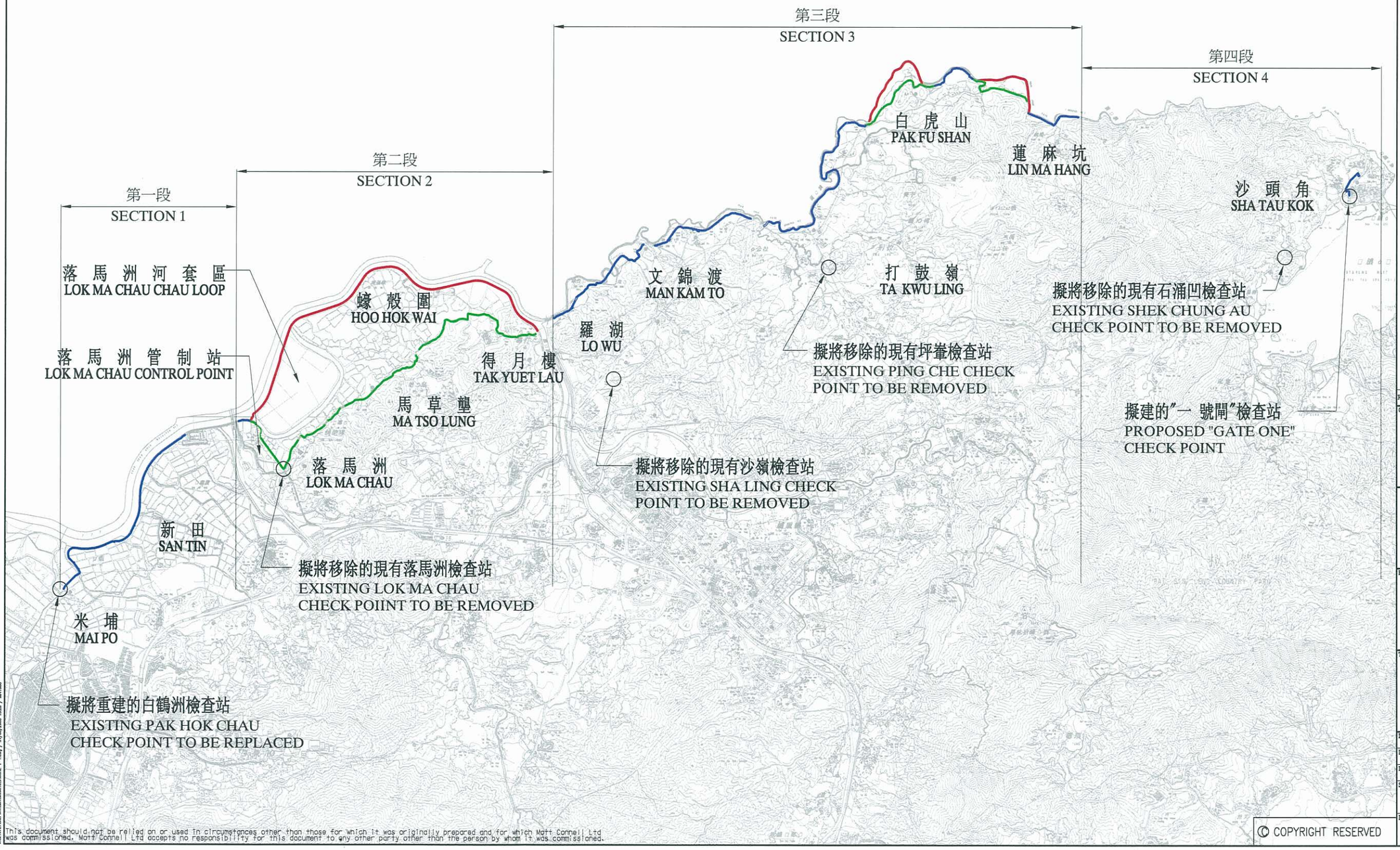

圖 例 :
LEGEND:

- 建議於現有邊界巡邏道路興建的輔助邊界圍網
  PROPOSED SECONDARY BOUNDARY FENCE ALONG EXISTING BOUNDARY PATROL ROAD
- 建議的主要及輔助邊界圍網及新邊界巡邏道路
  PROPOSED NEW BOUNDARY PATROL ROAD WITH PRIMARY AND SECONDARY BOUNDARY FENCES
- 擬將移除的現有邊界圍網
  EXISTING BOUNDARY FENCE TO BE REMOVED

Rev	Date	Drawn	Description	Ch'k'd	App'd

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Project

輔助邊界圍網及主圍網和邊界巡邏通路新段建造工程
CONSTRUCTION OF A SECONDARY BOUNDARY FENCE AND NEW SECTIONS OF PRIMARY BOUNDARY FENCE AND BOUNDARY PATROL ROAD

Title

概 覽 圖
GENERAL LAYOUT PLAN

Designed	—		Eng.Chk.	—	
Drawn	—		Coordination	—	
Dwg.Chk.	—		Approved	—	

Scale: N.T.S.
Project: 216727
Status: INF
CAD File: J:\216727\REPORT\DWG\060816\FIGURE 1-1.dwg
Drawing No.: Figure 1.1 (圖 1.1)
Rev: –

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