





# Police Facilities in Kong Nga Po

**Project Profile** 

(Report Reference: 310367/032/B)

July 2014 Civil Engineering and Development Department



# Police Facilities in Kong Nga Po

**Project Profile** 

(Report Reference: 310367/032/B)

July 2014

Civil Engineering and Development Department

Suite 1213 Chinachem Golden Plaza, 77 Mody Road, Tsim Sha Tsui East, Kowloon

This document is issued for the party which commissioned it We accept no responsibility for the consequences of this and for specific purposes connected with the above-captioned document being relied upon by any other party, or being used for project only. It should not be relied upon by any other party or any other purpose, or containing any error or omission which is used for any other purpose.

due to an error or omission in data supplied to us by other parties

This document contains confidential information and proprietary intellectual property. It should not be shown to other parties without consent from us and from the party which commissioned it



# Content

Cnapter	Title	Page
Table of C	ontents	
1.	Basic Information	1
2.	Outline of Planning and Implementation Programme	5
3.	Possible Impacts on the Environment	6
4.	Major Elements of the Surrounding Environment	10
5.	Environmental Protection Measures to be incorporated in the Design and any further Environmental Implications	12
6.	Use of previous approved EIA Reports	16
Tables		
Table 2.1:	Proposed timetable for implementation of the Project	5
Table 4.1:	Proposed timetable for implementation of the Project	3 11
Figures		
Figure 1:	Project Layout Plan	

Figure 2:

Location of the Development Area and Kong Nga Po Road



# Basic Information

### 1.1 Project Title

The title of this Project is "Police Facilities in Kong Nga Po".

### 1.2 Project Description and Nature of the Project

In October 2012, Civil Engineering and Development Department (CEDD) commenced an engineering feasibility study for Kong Nga Po. The objective of the Study is to ascertain the feasibility of developing the Kong Nga Po Site for residential use upon its release from the Frontier Closed Area (FCA). Meanwhile, an alternative land use option for co-locating various police facilities in Northern District to one centralised location in Kong Nga Po has been proposed. This land use option is considered to have a benefit in terms of site utilisation and operational efficiency.

The Committee on Planning and Lands Department (CPLD) agreed that a preliminary feasibility assessment on the alternative land use option of co-locating police facilities at the Kong Nga Po Site should be explored to facilitate a decision on the future land use of the Kong Nga Po Site on its meeting in June 2013. In responding to the above, CEDD carried out a Preliminary Feasibility Assessment for co-locating police facilities in Kong Kga Po in July 2013.

The Project consists of relocation of existing police facilities, construction of new police facilities and road improvement works for Kong Nga Po Road, which is anticipated to be completed for operation by 2022. The police facilities that will be located to Kong Nga Po will consist of the following:

### Existing police facilities to be relocated

- Lo Wu Firing Range;
- Ma Tso Lung Firing Range;
- Weapons Training Facilities and Police Driving and Traffic Training Facilities at Fan Garden, including Training Complex; and
- Helipads at Lo Wu Firing Range.

### New police facilities to be provided

Proposed Police Training Facility

#### Access road to be constructed / improved

- An underpass underneath Kong Nga Po Road connecting the northern part and southern part of the Kong Nga Po Site;
- · An internal access road connected to the underpass platform; and
- Road improvement works for Kong Nga Po Road



# 1.3 Name of the Project Proponent

The Project Proponent is Civil Engineering and Development Department (CEDD).

# 1.4 Location and Scale of the Project

The proposed Kong Nga Po Development locates in the North District roughly in midway between Sheung Shui/ Fanling urban area and Shenzhen River, east to the Man Kam To Road and north to Ng Tung River. Kong Nga Po in the North District is a rural area with very limited existing developments. Part of the area falls within the FCA. The only vehicular access to the Project Site is by the sub-standard rural track namely Kong Nga Po Road leading from Man Kam To Road. The Project Site for the proposed co-located police facilities in Kong Nga Po has a total area of approximately 18.9 ha and is characterised by a number of platforms created by past activities as a borrow site on a hilltop of a rural area.

The ground elevation of the Site gradually increases from approximately +30.0 mPD at the southern part of the Site to approximately +85.0 mPD at the northern part. The areas immediately adjacent to the boundary of the Site are relatively steep slopes, dipping downward to the north, to the east and to the west while the area to the south of the study site is a small hill with a peak elevation of approximately +70.0 mPD. There is no conservation area or conservation related protection area nearby. The nearest river/stream includes the village side stream in Sha Ling and Hung Lung Hang.

The northern part of the Site is generally a rural area; there is no settlement inside the Site except a pig farm located at the southern part. The nearest settlements to the Kong Nga Po Site include Sun Uk Ling, Sha Ling and Hung Lung Hang, some of the village houses are located within 300m from the proposed helipad. The existing Kong Nga Po Road is a single 2-way, 2-lane, about 5.5m wide carriageway with no pedestrian or cycle tracks on the side. It serves as the main road access to the site.

The layout plan showing the location of the co-locating police facilities is presented in **Figure 1**. The design of the proposed Project will be commenced in year 2016. The earliest advance site work is anticipated to be physically commenced by year 2018. The Project is targeted to be completed by year 2022. The scale of the co-locating police facilities to be located at Kong Nga Po site and the road improvement work for Kong Nga Po Road is provided as follows:

- Lo Wu Firing Range with around 152,000m<sup>2</sup> (380m x 40m) platform areas;
- Ma Tso Lung Firing Range with around 750 m<sup>2</sup> (30m x 25m) platform areas;
- Helipads with around 5,041m<sup>2</sup> (71m x 71m) platform areas;
- Weapon training facilities with around 10,800m<sup>2</sup> (120m x 90m) platform areas;
- Police Driving and Traffic Training Facilities with around 6.47ha platform areas including two training grounds for four-wheeled driving training with around 3,200m² platform areas each, two training grounds for two-wheeled driving training with around 1,800m² platform areas each, straight driving training track with 6,000m², one skid pan with a control tower with around 2,800m², one training ground for parking training and tests with around 3,200m² platform areas, and training complex with around 2,500m² (50m x 50m) platform area; and
- Proposed Police Training Facility with around 15,000m<sup>2</sup> (100m x 150m) platform area.



• Improve about 1.8km section of the existing Kong Nga Po Road to a local distributor and a design speed of 50kph, with the width ranges from 4.5m to 6.0m for one way carriageway and 7.3m to 14.6m for two way carriageway.

# 1.5 History of site

The Project Site is a former borrow site with part of the area within FCA. In 1980 and early 1990, the original topography of low conical hills and ridges was substantially modified and by earthworks associated with the construction of Kong Nga Po Road and the site platforms at the proposed development area.

The sub-standard rural track, Kong Nga Po Road has been constructed as the only access leading from Man Kam To Road to Kong Nga Po since around 1987. A pig farm located at the southern part of the Site is the only settlement within the Site. Kong Nga Po Road was completed by 1986, while earthworks at the Site continued until 1993.

Geological and geomorphological features at Kong Nga Po are generally subdued, with the exception of sharp ridgelines along the eastern boundaries and the southern boundary. Vegetation patterns have ebbed and flowed around the area in recent decades. In general, vegetation cover increased from the 1970s into the 1980s, with a tendency for the upper slopes and ridge crests to remain poorly vegetated, almost certainly reflecting thin soils and low water levels in these areas during dry season.

The Site does not contain any historical villages. Since 1990, it is mostly to be rural with ponds, open areas and scattered buildings. There was no significant change in the Project Site until 2007, since then there was less land under cultivation and more wooded areas.

Neither Declared Monuments, nor Graded Historic Buildings are found within the Site. Moreover, no known archaeological sites including site of Archaeological Interest listed by AMO are found located within or in close proximity to the Site.

# 1.6 Number and Types of Designated Project Covered by the Project

The project covers two designated projects under Environmental Impact Assessment Ordinance, which are:

- Item B.2 of Schedule 2 Part I: A helipad within 300 m of existing or planned residential development
- Item O.5 of Schedule 2 Part I: An open firing range



# 1.7 Name and Telephone Number of Contact Person(s)

For details of the project please contact:

Name: Mr. TAM Chung Keung

Address: Suite 1213, Chinachem Golden Plaza, 77 Mody Road, Tsim Sha Tsui East,

Kowloon, Hong Kong

Telephone: 3104 2526 Fax: 2739 0076

Email: simontam@cedd.gov.hk



# Outline of Planning and Implementation Programme

# 2.1 Project Implementation and Schedule

Table 2.1: Proposed timetable for implementation of the Project

Activities	Time
EIA study	2014
Approval of an EIA report	2016
Application for an Environmental Permit	2016
Commencement of Construction	2018

# 2.2 Interactions with Other Project

Potential projects that would interface with the Project has been identified and listed below:

- Proposed Organic Waste Treatment Facilities, Phase 2;
- Proposed Man Kam To Development Corridor;
- Fanling North Freshwater Service Reservoir under North East New Territories New Development Areas;
- Columbarium, Crematorium and Related Facilities at Sandy Ridge Cemetery; and
- Proposed development of village houses in Hung Lung Hang.



# Possible Impacts on the Environment

### 3.1 Outline of Processes Involved

The envisaged method of construction for various elements of the works to be conducted under the complex of co-locating police facilities at the Kong Nga Po Site includes:

- Site formation
- Foundation works
- Retaining walls and slope works
- · General building and structure construction
- Improvement of existing Kong Nga Po Road

The associated building and structure construction works for co-location of police facilities at Kong Nga Po Site will be carried out after completion of the site formation, foundation works, retaining wall and slope works of the complex.

# 3.2 Potential Environmental Impacts

The potential impacts on the environment during the construction and operation phases of the Project have been identified and summarised below.

### 3.2.1 Air Quality

### 3.2.1.1 Construction phase

During the construction phase, construction dust will be the major air pollutant arising from the site clearance, demolition and removal of existing above ground structures, excavation activities, foundation works, storage of potentially dusty construction materials, erosion of unpaved area and stockpiles, road improvement works and other construction associated works. Other gaseous emission, including construction plants, trucks and vehicles may also have the potential impact of the air quality. Due to the large area of the Project, it is considered appropriate to carry out a quantitative construction dust assessment.

### 3.2.1.2 Operation phase

During the operation phase, air quality impact may arise from the extra vehicular access to the police facilities through Man Kam To Road, Kong Nga Po Road and the internal access road. Beside extra vehicular access to the Project Site via Kong Nga Po Road, the operation of the relocated Police Driving and Traffic Training Facilities and the improved Kong Nga Po Road will also induce vehicular emissions during the training activities. The induced road traffic is expected to result in an increase of vehicular emission. Therefore, air quality impact induced by extra vehicular activities has to be properly assessed.

During the operation of the firing ranges, there is also a potential impact of lead and dust emissions from the firing practice. Although emissions from normal gunshots in the form of lead dust and lead fume is



limited, lead dust as a result of breakdown of lead bullet is the major source of air pollution from gunshots. Most of airborne lead emitted during gunshot comes from the bullet ejected. The bullet itself may be broken down to smaller particulates after hitting on the target so as to generate lead dust.

In regard of the helipad, due to the low usage frequency of the emergency helipad, no significant air pollution from helipad is anticipated.

Odour impact to the development due to the presence of pig farms, one within the Site and two outside the Site in which one of them is less than 250m away from the boundary, should be assessed. The odour issue arise from the planned odour source, i.e. the proposed Organic Waste Treatment Facilities, should also be considered in the assessment.

#### 3.2.2 Noise

#### 3.2.2.1 Construction phase

Potential noise impact to the noise sensitive receivers (NSRs) may arise from different construction activities including the use of powered mechanical equipment (PME), operation of construction plant, induced extra traffic activities associated with construction works.

### 3.2.2.2 Operation phase

The dominant fixed noise source during the operation phase of the Project will be the shooting noise from the firing ranges and training complex during police firing training. The noise impact to the identified NSRs should be assessed based on the types of weapons, shooting frequency, shooting range and number of shots per day.

In addition, fixed noise impact from the police driving and traffic training facilities for two-wheeled and four-wheeled driving training, and the driving training under different tracks and scenarios in high speed training tracks and skid pan should be assessed.

The helipad will be for emergency use and police training, however, noise generated from helipad is considered as one of the dominant noise sources. Helicopter noise will be generated when the helicopter is approaching and departing the helipad, and when it is manoeuvring on and over the helipad. The impact of helicopter noise will be assessed according to aircraft type, land frequency, and ranges of the approach and departure paths. Different operating modes of helicopter will also be considered to determine the noise level at the identified NSRs.

Traffic noise impact maybe induced by the increased vehicular access to the police facilities through Kong Nga Po Road and the internal access road to be built for the Project. Although the significance of induced traffic noise impact is expected to be smaller than that of shooting noise and helicopter noise, the induced traffic noise should still be properly assessed.

### 3.2.3 Water Quality

### 3.2.3.1 Construction phase

Under the current condition, the runoff from the Project Site is conveyed to the Shenzhen River through primary drainage system and discharged into Deep Bay Water Control Zone. The potential sources of



water quality impact include the site surface runoff, the wastewater generated from the construction activities, the sewage effluent from workforce and accidental spillage. Adverse water quality impacts from the construction activities have to be prevented by implementation of good site practice and appropriate mitigation measures.

### 3.2.3.2 Operation phase

During the operation phase, the sewage effluent discharges will be generated from the police facilities. Any effluent discharged from the police facilities will be required to comply with the standards stipulated in the discharge licences issued by EPD.

### 3.2.4 Waste Management

### 3.2.4.1 Construction phase

Wastes are mainly generated from the site formation, roads construction and other construction works. The excavated materials, chemical waste, construction and demolition (C&D) materials and the general refuse should be handled in accordance with the Waste Disposal Ordinance.

### 3.2.4.2 Operation phase

During the operation phase, the cartridge casing and the general refuse would be the main sources of waste.

### 3.2.5 Ecology

### 3.2.5.1 Construction phase

The proposed site has high level of human disturbance. The dominant habitats of the Site are upland grasslands and shrublands. The habitats of surrounding area are mainly open storage, container yards, active pig farms, abandoned fish ponds, young shrubland and degraded secondary woodlands.

During the construction phase, the existing upland grasslands and shrubland habitats within the project area will be directly affected. Some flora and fauna species of conservation interests that found within or in close vicinity of the project area may be affected by the Project directly due to habitat loss or indirectly due to off-site disturbance such as construction noise and dust, and reduction of ecological carrying capacity. Potential ecological impacts to the habitats and to flora and fauna species of conservation interest found within the study area for the proposed Project should be assessed and mitigation should be considered if necessary.

#### 3.2.5.2 Operation phase

Operation of the Project may impose potential indirect impact of air quality or noise due to increased traffic and during the operation of open firing range and helipad on off-site habitat in operation phase. The indirect ecological impact due to the noise and air disturbance during operation of the Project will be assessed in the EIA study. The potential disturbance to the off-site pond or watercourse habitat is not expected as sewage and wastewater generated during the operation of the facilities should be properly handed and treated before discharge and closely monitored under respective regulations and ordinances on water quality.



### 3.2.6 Landscape and Visual

The Project Site is located in a rural inland plain landscape character area, consisting of low scrub and grasslands, and scattered patches of natural woodland. The proposed Project will have a moderate change on the existing landscape feature.

Since the proposed development is situated at the top of a hilly terrain and dominated by flat lowland landscapes, it can be easily seen from various locations in the vicinity of the project area and further away from the project area. During the construction phase, potential visual impacts may arise from the construction of the police facilities. The visual impacts generated by the proposed development during the operation phase will be caused by the buildings, training facilities, slope cutting, site formation, retaining wall structures and baffles beams over the firing ranges.

### 3.2.7 Cultural Heritage

Neither Declared Monuments nor Graded Historic Buildings within and in the vicinity of Project Site was identified.

#### 3.2.8 Hazard to Life

Part of the Kong Nga Po Road is within the PHI consultation zone for Sheung Shui Water Treatment Works. The associated potential hazard during the construction and operation phases of the Kong Nga Po Road will need to be addressed.



# Major Elements of the Surrounding Environment

### 4.1 Existing Environment

The Site lies between the New Towns of Fanling/ Sheung Shui to the south and Shenzhen to the north, a major ridge line (Cheung Po Tau, Cham Shan, Ma Tau Leng ridge) of an altitude of 100 m above sea- level separates the Site from Fanling/ Sheung Shui. The study area is located at Kong Nga Po, with part of the area falling within the FCA. The study area is a rural area and the habitat type is dominated by hilly grassland with patchily located shrubland/ woodland.

### 4.1.1 Air Quality

The Kong Nga Po Road is the main access to the Site. The Project is surrounded by the east and southeast by small scaled container storage areas occupying disused agricultural land with small village settlements. In relation to odour issues, there are three pig farms, including one within and two outside the Site.

#### 4.1.2 Noise

The Project Site is a rural area in nature with no settlement except a pig farm. The traffic noise mainly comes from the Kong Nga Po Road.

### 4.1.3 Water Quality

Fish ponds and watercourses are identified as the nearby inland water sensitive receivers. The closest water sensitive receivers are three water ponds and a small stream located on the west side of the Project Site.

#### 4.1.4 Waste

Within the Project Site, the livestock waste is the existing solid waste arising from pig farm. The storage of concrete and wood materials on the concrete-paved ground and the open area with the storage of wood strips are identified within the Site. Some communal waste and general refuse were found on the access road.

### 4.1.5 Ecology

The proposed Site has high level of human disturbance. Habitats of surrounding area are mainly open storage, container yards, active pig farms, abandoned fish ponds, young shrubland and degraded secondary woodlands. The dominant habitats of the Site are upland grasslands and shrublands.

In the course of ecological field survey conducted in 2013, five flora species of conservation interests, 16 bird species of conservation interests, one reptile species of conservation interest and 29 butterfly species were recorded in the vicinity of the Project Area. The fauna and flora species recorded in the Site is largely common and widespread.



### 4.1.6 Landscape and Visual

The Site is located in a rural inland plain landscape character area, consist of low scrub and grasslands, and scattered patches of natural woodland. The surrounding area is contains several small scale rural settlements, farmlands and scattered rural workshops/storage yards.

# 4.1.7 Key Existing and Planned Sensitive Receivers

The potential existing and planned sensitive receivers and parts of the natural environmental that might be affected by the proposed Project are identified in **Table 4.1**.

Table 4.1: Potential Sensitive Receivers of the Project

Table 4.1: Potential Sensitive Receivers	of the Project
Items	Sensitive Receivers
Air Sensitive Receivers (ASRs)	Existing Sensitive Receivers
	Village Houses in Sha Ling
	Village Houses in Kong Nga Po
	A Temple
	San Uk Ling Holding Centre
	Police Dog Unit and Force Search Unit Training School
	Hong Kong Police Force Border District Headquarters
	Rifle Range
	Planned Sensitive Receivers
	Warehouses in proposed Man Kam To Development Corridor
	Village Houses in proposed Hung Lung Hang
Noise Sensitive Receiver (NSR)	Existing Sensitive Receivers
	Village Houses in Kong Nga Po.
	Village Houses in Sha Ling
	Planned Sensitive Receivers
	Village Houses in proposed Hung Lung Hang
Water Sensitive Receivers (WSRs)	Existing Sensitive Receivers
	Watercourses
Landana Ohamadan Anasa (LOAs)	Fish ponds
Landscape Character Areas (LCAs)	Upland Hillside Landscape
Viewal Consistive Descrivers (VCDs)	Rural Settled Valley Landscape
Visual Sensitive Receivers (VSRs)	Man Kam To Road
	Vehicular access road located to the north of the Project Site  Lei Uk San Tsuen
	Pig farm
	Village houses scattered in the area to the north of Kong Nga Po Road
	Village located to the west of the Project Site
	Hiking trail at Cham Shan
	I mang dan at onam onam



# Environmental Protection Measures to be incorporated in the Design and any further Environmental Implications

## 5.1 Air Quality

### 5.1.1 Construction phase

To mitigate the dust impact caused by the construction activities, dust control requirements under the Air Pollution Control (Construction Dust) Regulation should be strictly implemented. Practicable measures for minimising dust impact including regular water spraying on site, covering of stockpiles with impervious sheeting to reduce windblown dust and other good site practices shall be considered. With the implementation of the dust control measures, the impact of air quality can be minimised and maintained to an acceptable level.

### 5.1.2 Operation Phase

Potential impact on air quality due to the increased vehicles to Kong Nga Po Site will be properly assessed. There is no specific mitigation measures proposed for the induced vehicular emissions, nevertheless, as older vehicles are kept retiring from the fleet, operation emissions from induced vehicular activities are expected to improve.

The dust impact and potential lead emission from the operation of firing ranges can be reduced through the implementation of precautionary measures including erection of soft materials behind the target plate to collect the bullets for eliminating lead dust when hitting the target. Fence wall within the firing range will further depress and obstruct potential dispersion of the lead dust to the nearby environment. Lead fume emission during gun shooting will be minimised by the use of lead-free primer mixture for the firearm used within the proposed firing range.

Although the frequency of using the emergency helipad is low, the air quality impact from the helipad should be assessed in the EIA study.

The cumulative odour impact from the existing three pig farms and the proposed Organic Waste Treatment Facilities should be assessed. The appropriate air quality mitigation measures should be considered to ensure the impact of air quality can be minimised.

### 5.2 Noise

### 5.2.1 Construction phase

Noise mitigation measures should be provided to reduce the noise impacts to the surrounding NSRs. The mitigation measures included the adoption of good site practice, use of quieter plant, use of movable noise enclosure or barriers and use of noise insulting fabric. With the application of various noise mitigation measures, the construction noise levels can be mitigated to an acceptable level.



### 5.2.2 Operation phase

Potential noise impact due to the induced vehicular traffic to Kong Nga Po Site and the operation of the police facilities especially firing ranges, helipad and the Police Driving and Traffic Training Facilities will be properly assessed to review if any mitigation measures like installation of noise barriers are necessary.

To mitigate the shooting noise generated from firing ranges to the nearby NSRs, the erection of fence wall, screening barrier and/ or use of absorptive material around the firing ranges should be considered.

To mitigate the noise generated from helipad, the siting of helipad and orientation of flight path should be carefully considered to mitigate the noise impact to the surrounding NSRs. In addition, mitigation measures including installation of the acoustic insulation into the NSRs, adoption of the helicopter with lower noise emissions and control of flight frequency should also be considered.

# 5.3 Water Quality

### 5.3.1 Construction phase

Site surface runoff will be the potential sources of water quality impact during the construction phase. Good site practice should be implemented in accordance with the Practice Note for Professional Persons on Construction Site Drainage (ProPECC PN1/94). In addition, all wastewater produced on site should be treated and the treated effluent should comply with the discharge licence stipulated under the Water Pollution Control Ordinance (WPCO) and the effluent discharge into the water courses in the Deep Bay Area should comply with the "No Net Increase in Pollution Loads Requirement in Deep Bay" policy. With the implementation of mitigation measures, the water quality impact during construction phase can be minimized.

### 5.3.2 Operation Phase

Surface channel will be provided to collect stormwater. The requirement under the Water Pollution Control Ordinance will be followed; no discharge of wastewater will be permitted. The water quality impact during operation phase will be assessed in the EIA study.

### 5.4 Waste Management

### 5.4.1 Construction phase

During the construction phase, the amount of construction waste should be minimised through the adoption of good site practice. The inert and non-inert Construction and Demolition (C&D) materials generated should be collected, sorted, reused/ recycled or disposed of properly. The chemical waste produced should be handled in accordance with the Waste Disposal (Chemical Waste) (General) Regulations. Regarding to the general refuse, the waste storage areas should be cleaned and maintained on a regular basis.

### 5.4.2 Operation phase

The cartridge casing from firing ranges and the general refuse will be collected, handled and stored in the enclosed containers or bins and collected by the waste collector regularly.



## 5.5 Ecology

### 5.5.1 Construction phase

With the implementation of mitigation measures to the impacts on air, noise, water quality and waste, the potential ecological impacts can be minimized. During construction phase, the proper control of site runoff can minimize the impact to the offsite aquatic wildlife. Erection and maintenance of a temporary protective fence where trees and vegetation including those individuals of conservation interest identified to be retained within the Project Site should be in place to avoid any potential impact from construction activities such as vehicle movement and materials storage.

### 5.5.2 Operation phase

Should impact to flora species of conservation concern identified, mitigation measures for preservation of the flora species of conservation concern should be considered. Attention should be given to the small patches of wooded area within the Project Site.

Potential disturbance to off-site pond or watercourse habitats is also considered to be insignificant if sewage and wastewater generated during the operation of the facilities are properly handled and treated before discharge and closely monitored under respective regulations and ordinances on water quality.

# 5.6 Landscape and Visual

### 5.6.1 Construction phase

During the construction phase, the landscape and visual impacts to the nearby villages can be minimised through the provision of different mitigation measures such as control of lighting on site, erect site hoarding compatible with the surrounding environmental for the works area and protect the retained trees near the works area. In addition, preservation of the existing landscape features and the slopes with existing trees should be considered to minimise the landscape impacts.

### 5.6.2 Operation phase

During the operation phase, the greening measures can be implemented to soften the hard lines of the retaining structures and minimise landscape impacts by preserving the existing trees. In addition, various landscape treatments including screen planting, vertical greening and unique retaining wall design can be used as mitigation measures to minimise the visual impacts and to help integrate the proposed development into the naturalistic landscape in the surrounding areas.

### 5.7 Cultural Heritage

No mitigation measure for cultural heritage is considered necessary as neither Declared Monuments nor Graded Historic Buildings was identified in the Site, however if any buildings or sites of cultural heritage or buried archaeological deposits is encountered during the construction of the Project, in-situ preservation is always the first priority if the project layout allows for it. If preservation is not possible, mitigation measures have to be proposed to minimise the degree of adverse impact to the greatest possible extent where appropriate. Moreover, any disturbance that may cause physical damage should be avoided wherever possible through alternation of design, construction method or protective measures as appropriate.



## 5.8 Hazard to Life

Suitable mitigation measure for the potential hazard of the Sheung Shui Water Treatment Works during the construction and operation should be implemented. Suspension of construction works during chlorine deliverables, provision of emergency response arrangement and training and road enclosure should be considered in the EIA study.



# 6. Use of previous approved EIA Reports

The following approved EIA report was used for reference:

- Peng Chau Helipad (approved on 25 August 2005);
- Expansion of Heliport Facilities at Macau Ferry Terminal (approved on 8 February 2006);
- North East New Territories New Development Areas Environmental Impact Assessment (approved on 18 October 2013); and
- Development of Organic Waste Treatment Facilities, Phase 2 (approved on 3 December 2013).



# **FIGURE**







