

**ENVIRONMENTAL IMPACT ASSESSMENT ORDINANCE (CAP. 499)**  
**SECTION 5 (7)**

**ENVIRONMENTAL IMPACT ASSESSMENT STUDY BRIEF NO. ESB-280/2014**

**PROJECT TITLE :** **OPERATION OF THE EXISTING TAI LAM EXPLOSIVES  
MAGAZINE AT TAI SHU HA YUEN LONG FOR LIANTANG/  
HEUNG YUEN WAI BOUNDARY CONTROL POINT  
PROJECT**  
(hereinafter known as the "Project")

**NAME OF APPLICANT :** **DRAGAGES HONG KONG LTD.**  
(hereinafter known as the "Applicant")

**1. BACKGROUND**

- 1.1 An application (No. ESB-280/2014) for an Environmental Impact Assessment (EIA) Study Brief under section 5(1)(a) of the Environmental Impact Assessment Ordinance (EIAO) was submitted by the Applicant on 11 September 2014 with a project profile (No. PP-516/2014) (the Project Profile).
- 1.2 The Project is to continue using the existing Tai Lam Explosive Magazine at Yuen Long for the tunnel construction works under the Liantang/Heung Yuen Wai Boundary Control Point (BCP) project. The magazine is currently use by the MTR Corporation Limited (MTRC) for the construction of the Hong Kong Section of Guangzhou-Shenzhen-Hong Kong Express Rail Link (XRL) until end of 2014 (Environmental Permit No. EP-349/2009/L). The Applicant intends to take over the explosive magazine after the XRL project finishes using this facility.
- 1.3 No construction activity will be carried out at the explosive magazine site. Mines Division of the Civil Engineering and Development Department will deliver a maximum of 800 kg explosives daily to the Tai Lam Explosive Magazine. The Applicant will deliver the explosives from the magazine to three BCP worksites (North Portal, Mid-ventilation Portal and South Portal) by trucks approved by the Mines Division of the Civil Engineering and Development Department.
- 1.4 The existing Tai Lam Explosive Magazine is composed of:

- (i) Two stores;
- (ii) Secure fence;
- (iii) CCTV system;
- (iv) Guard house; and
- (v) Street fire hydrant water tank (245m<sup>3</sup>) and 2 pumps.

Location of the Project and the proposed delivery routes as given in the Project Profile is reproduced in Appendix A of this study brief.

- 1.5 The Project is a designated project by virtue of Item K.10 “*An explosives depot or explosives manufacturing plant in a stand-alone, purpose built building*” in Part I of Schedule 2 of the EIAO
- 1.6 Pursuant to section 5(7)(a) of the EIAO, the Director of Environmental Protection (the Director) issues this EIA study brief to the Applicant to carry out an EIA study.
- 1.7 The purpose of this EIA study is to provide information on the nature and extent of environmental impacts arising from the operation of the Project and related activities that take place concurrently. This information will contribute to decisions by the Director on :
- (i) the acceptability of any adverse environmental consequences that are likely to arise as a result of the Project;
  - (ii) the conditions and requirements for the operation of the Project to mitigate against adverse environmental consequences; and
  - (iii) the acceptability of residual impacts after the proposed mitigation measures is implemented.

## **2. OBJECTIVES OF THE EIA STUDY**

2.1 The objectives of the EIA study are as follows :

- (i) to describe the Project and associated works together with the requirements and environmental benefits for carrying out the Project;

- (ii) to identify and describe elements of community and environment likely to be affected by the Project and/or likely to cause adverse impacts to the Project, including natural and man-made environment and the associated environmental constraints;
- (iii) to identify and quantify emission sources (including air quality, noise, water quality, waste, etc. as appropriate) and determine the significance of impacts on sensitive receivers and potential affected uses;
- (iv) to propose the provision of mitigation measures to minimize pollution, environmental disturbance and nuisance during operation of Project;
- (v) to investigate the feasibility, practicability, effectiveness and implications of the proposed mitigation measures;
- (vi) to identify, predict and evaluate the residual environmental impacts (i.e. after practicable mitigation) and the cumulative effects expected to arise during the operation phases of the Project in relation to the sensitive receivers and potential affected uses;
- (vii) to identify, assess and specify methods, measures and standards, to be included in the operation of the Project which are necessary to mitigate these residual environmental impacts and cumulative effects and reduce them to acceptable levels;
- (viii) to investigate the extent of the secondary environmental impacts that may arise from the proposed mitigation measures and to identify constraints associated with the mitigation measures recommended in the EIA study, as well as the provision of any necessary modification;
- (ix) to design and specify environmental monitoring and audit requirements for the effective implementation of the recommended environmental protection and pollution control measures; and
- (x) to identify any additional studies necessary to implement the mitigation measures or monitoring and proposals recommended in the EIA report.

### **3. DETAILED REQUIREMENTS OF THE EIA STUDY**

#### **3.1 The Purpose**

3.1.1 The purpose of this study brief is to scope the key issues of the EIA study and to specify the environmental issues that are required to be reviewed and assessed in the EIA report. The Applicant has to demonstrate in the EIA report that the criteria in the relevant sections of the Technical Memorandum on the Environmental Impact Assessment Process of the Environmental Impact Assessment Ordinance (hereinafter referred to as “the TM”) are complied with.

#### **3.2 The Scope**

3.2.1 The scope of this EIA study shall cover the Project and associated works proposed in the Project Profile and mentioned in Section 1.2 and 1.3 above. The EIA study shall address the likely key issues described below, together with any other key issues identified during the course of the EIA study:

- (i) review and, if necessary, update the relevant sections of the approved Hong Kong Section of Guangzhou-Shenzhen-Hong Kong Express Rail Link (XRL) EIA report (No. AEIAR-143/2009) for the environmental impacts arising from operation of the Tai Lam Explosive Magazine;
- (ii) potential hazard to life including explosive storage and transport during operation of the Project; and
- (iii) potential cumulative impacts of the Project, through interaction or in combination with other existing, committed and planned projects in the vicinity of the Project.

#### **3.3 Description of the Project**

3.3.1 The Applicant shall provide information on the background and history of the Project, including consideration given to different options as described in Sections 3.3.2 and 3.3.3 below. The Applicant shall describe and compare the environmental benefits and disbenefits of the scenarios with or without the Project.

### 3.3.2 Consideration of Alternative Explosive Transport Routes

The Applicant shall present in the EIA report the consideration of alternatives of the Project, including alternative transport routes, with a view to avoiding adverse environmental impacts during operation of the Project.

### 3.3.3 Selection of Preferred Scenario

The Applicant shall, taking into consideration of the findings in Sections 3.3.2 above, describe the reasons for selecting the proposed routings and the part that environmental factors played in the selection.

## 3.4 **Technical Requirements**

3.4.1 The Applicant shall conduct the EIA study to address the environmental aspects described in Sections 3.1, 3.2 and 3.3 above. The assessment shall be based on the best and latest information available during the course of the EIA study. The Applicant shall assess the cumulative environmental impacts from the Project and interacting projects as identified in the EIA study. The EIA study shall include the following technical requirements on specific impacts.

### 3.4.2 Review and Update of the previously approved EIA

3.4.2.1 To review the approved Hong Kong Section of Guangzhou-Shenzhen-Hong Kong Express Rail Link (XRL) EIA report (No. AEIAR-143/2009) XRL) for relevant environmental impacts apart from hazard to life on sensitive receivers arising from operation of the Tai Lam Explosive Magazine. Should the review concluded that there are changes in circumstances that warrant a revised environmental impact assessment for any media, the revised assessment(s) shall follow the relevant criteria and guidelines as stated in the respective Annexes of the TM. The Applicant shall submit the detailed technical requirements for the Director's approval prior to commencement of the revised assessment(s).

### 3.4.3 Impact of Hazard to Life

3.4.3.1 The Applicant shall follow the criteria for evaluating hazard to life as stated in Annex 4 of the TM.

3.4.3.2 The hazard assessment for the operation of the Project shall follow the detailed

technical requirements given in Appendix B of this EIA Study Brief.

### 3.4.4 Presentation of Summary Information of Environmental Outcomes

#### 3.4.4.1 Summary of Environmental Outcomes

The EIA report shall contain a summary of key environmental outcomes arising from the EIA study, including environmental benefits of the Project and the environmental protection measures recommended, population and environmentally sensitive areas protected, recommended environmentally friendly designs, key environmental problems avoided and any compensation areas included.

#### 3.4.4.2 Summary of Environmental Impacts

To facilitate effective retrieval of pertinent key information, the EIA report shall contain a summary table of environmental impacts showing the assessment points, results of impact predictions, relevant standards or criteria, extents of exceedances predicted, impact avoidance measures considered, mitigation measures proposed and residual impacts (after mitigation). This summary shall cover each individual impact and shall form an essential part of the executive summary of the EIA report.

### 3.4.5 Environmental Monitoring and Audit (EM&A) Requirements

3.4.5.1 The Applicant shall identify and justify in the EIA study whether there is any need for EM&A activities during the operation phase of the Project and, if affirmative, define the scope of EM&A requirements for the Project in the EIA study.

3.4.5.2 Subject to the confirmation of the EIA study findings, the Applicant shall follow the guidelines for an EM&A programme as stated in Annex 21 of the TM.

3.4.5.3 The Applicant shall prepare a Project Implementation Schedule in the form of a checklist as shown in Appendix C of this EIA study brief. It shall contain the EIA study recommendations and mitigation measures with reference to the implementation programme.

## **4 DURATION OF VALIDITY**

4.1 The Applicant shall notify the Director of the commencement of the EIA study. If

the EIA study does not commence within 36 months after the date of issue of this EIA study brief, the Applicant shall apply to the Director for a fresh EIA study brief before commencement of the EIA study.

## **5 REPORT REQUIREMENTS**

5.1 In preparing the EIA report, the Applicant shall refer to Annex 11 of the TM for the contents of an EIA report. The Applicant shall also refer to Annex 20 of the TM, which stipulates the guidelines for the review of an EIA report. The Applicant shall accompany with the submission of the EIA report a summary, pointing out where in the EIA report the respective requirements of this EIA Study have been addressed and fulfilled.

5.2 The Applicant shall supply the Director with hard and electronic copies of the EIA report and the executive summary in accordance with the requirements given in Appendix D. The Applicant shall, upon request, make additional copies of EIA report/documents available to the public, subject to payment by the interested parties of full costs of printing.

## **6 OTHER PROCEDURAL REQUIREMENTS**

6.1 If there is any change in the name of Applicant for this EIA study brief during the course of the EIA study, the Applicant must notify the Director immediately.

6.2 If there is any key change in the scope of the Project mentioned in Section 1.2 of this EIA study brief and in Project Profile (No. PP-516/2014), the Applicant must seek confirmation from the Director in writing on whether or not the scope of issues covered by this EIA study brief can still cover the key changes, and the additional issues, if any, that the EIA study must also address. If the changes to the Project fundamentally alter the key scope of the EIA study brief, the Applicant shall apply to the Director for a fresh EIA study brief.

## **7. LIST OF APPENDICES**

7.1 This EIA study brief includes the following appendices  
Appendix A – Project Location Plan

Appendix B – Requirements for Hazard to Life Assessment

Appendix C – Implementation Schedule

Appendix D – Requirements for EIA Report Documents

--- END OF EIA STUDY BRIEF ---

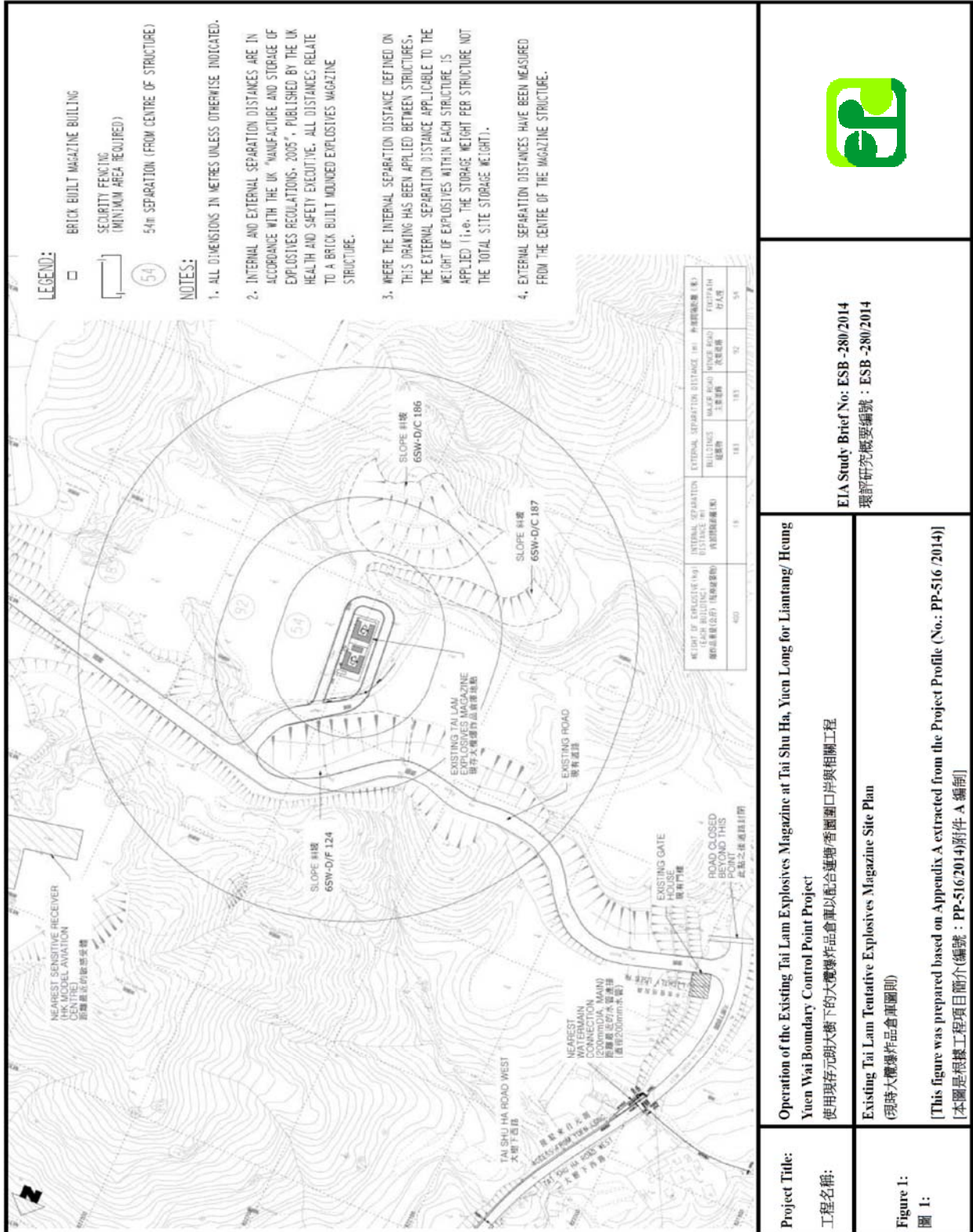
October 2014

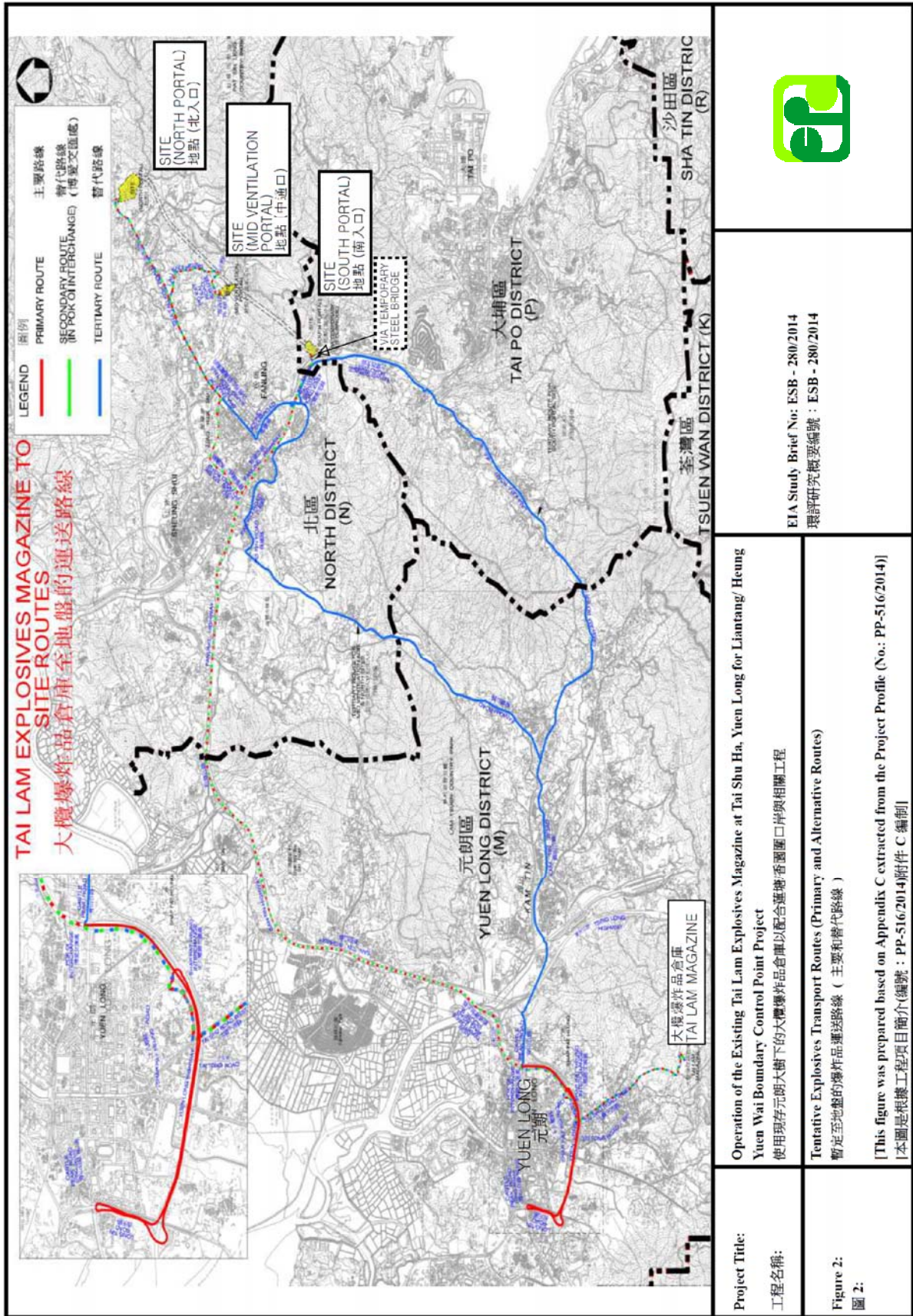
Environmental Assessment Division

Environmental Protection Department



**Appendix A**





EIA Study Brief No: ESB - 280/2014  
環評研究概要編號: ESB - 280/2014

Project Title: Operation of the Existing Tai Lam Explosives Magazine at Tai Shu Ha, Yuen Long for Liantang/ Heung Yuen Wai Boundary Control Point Project

工程名稱: 使用現存元朗大樹下的大欄爆炸品倉庫以配合連地-香園圍口岸與相關工程

Figure 2: Tentative Explosives Transport Routes (Primary and Alternative Routes)

圖 2: 暫定至地盤的爆炸品運送路線 (主要和替代路線)

[This figure was prepared based on Appendix C extracted from the Project Profile (No.: PP-516/2014)]

[本圖是根據工程項目簡介(編號: PP-516/2014)附件C編制]

**Appendix B**

**Requirements for Hazard to Life Assessment**

1. The Applicant shall carry out hazard assessment as follows:
  - (i) Identify hazardous scenarios associated with the storage and transport of explosives and then determine a set of relevant scenarios to be included in a Quantitative Risk Assessment (QRA);
  - (ii) Execute a QRA of the set of hazardous scenarios determined in (i), expressing population risks in both individual and societal terms;
  - (iii) Compare individual and societal risks with the criteria for evaluating hazard to life stipulated in Annex 4 of the TM; and
  - (iv) Identify and assess practicable and cost-effective risk mitigation measures.
2. The methodology to be used in the hazard assessment should be consistent with previous studies having similar issues (e.g. Hong Kong Section of Guangzhou-Shenzhen-Hong Kong Express Rail Link (XRL) EIA report (Register No. AEIAR-143/2009)).

**Appendix C**

**Implementation Schedule of Recommended Mitigation Measures**

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures*	Objectives of the Recommended Measure & Main Concerns to address	Implementation Agent	Location/ Duration of the measure	Implementation stages* (Des, C O)	Relevant Legislation & Guidelines

\* All recommendations and requirements resulted during the course of EIA Process, including ACE and/or accepted public comment to the proposed project

\*\* Des = Design, C = Construction, O + Operation

**Appendix D**

**Requirements for EIA Report Documents**

1. The Applicant shall supply the Director with the following number of copies of the EIA report and the executive summary:
  - (i) 30 copies of the EIA report and 30 copies of the bilingual (in both English and Chinese) executive summary as required under section 6(2) of the EIAO to be supplied at the time of application for approval of the EIA report.
  - (ii) When necessary, addendum to the EIA report and the executive summary submitted in item (i) above as required under section 7(1) of the EIAO, to be supplied upon advice by the Director for public inspection.
  - (iii) 20 copies of the EIA report and 50 copies of the bilingual (in both English and Chinese) executive summary with or without Addendum as required under section 7(5) of the EIAO, to be supplied upon advice by the Director for consultation with the Advisory Council on the Environment.
2. To facilitate public inspection of EIA report via EIAO Internet Website, the Applicant shall provide electronic copies of both the EIA report and the executive summary prepared in HyperText Markup Language (HTML) (version 4.0 or later) and/or in Portable Document Format (PDF version 1.3 or later). A content page capable of providing hyperlink to each section and sub-section of the EIA report and the executive summary shall be included in the beginning of the document. Hyperlinks to figures, drawings and tables in the EIA report and the executive summary shall be provided in the main text from where respective references are made. Graphics in the report shall be in interlaced GIF format or in suitable formats accepted by the Director.
3. The electronic copies of the EIA report and the executive summary shall be submitted to the Director at the time of application for approval of the EIA report.
4. When the EIA report and the executive summary are made available for public inspection under section 7(1) of the EIAO, the content of the electronic copies of the EIA report and the executive summary must be the same as the hard copies and the Director shall be provided with the most updated electronic copies.

5. To promote environmentally friendly and efficient dissemination of information, both hardcopies and electronic copies of future EM&A reports recommended by the EIA study shall be required.

- END -