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17 August 2015

Food and Environmental Hygiene Department  
The Government of the Hong Kong SAR

**Environmental Impact Assessment (EIA) Ordinance (Cap. 499)**  
**Application for EIA Study Brief**

**Project Title : Mui Wo Lai Chi Yuen Cemetery Extension**  
**(Application No.: ESB-288/2015)**

I refer to your above application received on 6 July 2015 for an EIA study brief for an EIA Study Brief under section 5(1)(a) of the EIA Ordinance.

In accordance with Section 5(7)(a) of the Ordinance and after public inspection of the project profile, I issue the attached EIA Study Brief (No. ESB-288/2015) for your preparation of the EIA report.

Under Section 15 of the Ordinance, the EIA Study Brief will be placed on the EIA Ordinance Register. It will also be placed on the EIA Ordinance website (<http://www.info.gov.hk/eia/>).

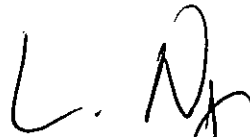
You may submit an application for approval of the EIA report in accordance with Section 6(2) of the Ordinance after its completion. Upon receipt of your application, this department will decide under Section 6(3) of the Ordinance whether the EIA report meets the requirements of the EIA Study Brief and the Technical Memorandum on EIA Process, and accordingly advise you under Section 6(4) of the Ordinance whether a submission to the Advisory Council on the Environment (ACE) or its subcommittee is required. In this connection, you are required to provide sufficient copies of the Executive Summary of the EIA report to the Secretary of the EIA Subcommittee of the Council for selection for submission when you submit the EIA report to this department for approval. Please liaise with Ms. Evelyn LEUNG (Tel: 2594 6323) regarding the details in due course.

If the EIA report is selected by ACE for submission and presentation, you are expected to provide ACE with an account of the environmental issues arising from the project, major conclusions and recommendations of the EIA study. In particular, the main environmental concerns of the general public and interest groups who may be affected by the project should be identified and addressed in the EIA study. As such, you are strongly advised to engage the public and interest groups during the course of the EIA study. Please find attached a copy of the "Modus Operandi of the EIA Subcommittee of the ACE" for your reference.

Please note that if you are aggrieved by any of the content of this EIA Study Brief, you may appeal under Section 17 of the EIA Ordinance within 30 days of receipt of this EIA Study Brief.

Should you have any queries on the above application, please contact my colleague Ms. Clara U of this department at 2835 2164.

Yours sincerely,



(Lawrence K.K. NGO)  
Acting Principal Environmental Protection Officer  
(Regional Assessment)  
for Director of Environmental Protection

Encl.

c.c. (w/o encl.)

Secretary of ACE EIA Subcommittee (Attn: Ms. Evelyn LEUNG) Fax: 2872 0603

**Environmental Impact Assessment Ordinance (Cap. 499), Section 5 (7)**

**Environmental Impact Assessment Study Brief No. ESB-288/2015**

**Project Title: Mui Wo Lai Chi Yuen Cemetery Extension**  
**(hereinafter known as the "Project")**

**Name of Applicant:**  
**Food and Environmental Hygiene Department**  
**(hereafter known as the "Applicant")**

**1. BACKGROUND**

- 1.1 An application (No. ESB-288/2015) 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 6 July 2015 with a project profile (No. PP-526/2015) (the Project Profile).
- 1.2 The scope of the Project comprises the construction and operation of the following:
- (i) an elevated platform of around 225m<sup>2</sup> supported by structural columns within the existing Lai Chi Yuen Cemetery boundary to accommodate some 784 niches;
  - (ii) ancillary facilities including a joss paper burner and planters; and
  - (iii) a site access of 7.5m<sup>2</sup> just outside the cemetery boundary.

The location of the Project is shown in Figures 1 and 2 of this EIA Study Brief.

- 1.3 The Project is wholly within the Lantau South Country Park on the approved South Lantau Coast Outline Zoning Plan No. S/SLC/19. The Project is a designated project by virtue of Item Q.1 of Schedule 2, Part I of the EIAO, which specifies "*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.*"
- 1.4 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.
- 1.5 The purpose of this EIA study is to provide information on the nature and extent of environmental impacts arising from the construction and operation of the Project and associated works that will take place concurrently. This information will contribute to decisions by the Director on:
- (i) the overall acceptability of any adverse environmental consequences that are likely to arise as a result of the Project;
  - (ii) the conditions and requirements for the detailed design, construction and operation of the Project to mitigate against adverse environmental consequences wherever practicable; and

- (iii) the acceptability of residual impacts after the proposed mitigation measures are 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 both the natural and man-made environment and the associated environmental constraints;
- (iii) to identify and quantify emission sources and determine the significance of impacts on sensitive receivers and potential affected uses;
- (iv) to identify and quantify any potential losses or damage to flora, fauna and natural habitats;
- (v) to propose the provision of infrastructure or mitigation measures so as to minimize pollution, environmental disturbance and nuisance during construction and operation of the Project;
- (vi) to investigate the feasibility, effectiveness and implications of the proposed mitigation measures;
- (vii) to identify, predict and evaluate the residual (i.e. after practicable mitigation) environmental impacts and the cumulative effects expected to arise during the construction and operation phases of the Project in relation to the sensitive receivers and potential affected uses;
- (viii) to identify, assess and specify methods, measures and standards, to be included in the detailed design, construction and operation of the Project which are necessary to mitigate these residual environmental impacts and cumulative effects and reduce them to acceptable levels;
- (ix) to design and specify environmental monitoring and audit requirements; 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**

The purpose of this Study Brief is to set out the purposes and objectives of the EIA study, the scope of environmental issues which shall be addressed, the requirements that the EIA study shall need to fulfil, and the necessary procedural and reporting requirements. The

Applicant shall demonstrate in the EIA report whether 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 mentioned in sub-section 1.2 above. For the purpose of assessing whether the environmental impacts shall comply with the criteria of the TM, the EIA study shall address the key issues described below, together with any other key issues identified during the course of the EIA study:

- (i) potential air quality impact on air sensitive receivers due to construction and operation of the Project and associated works;
- (ii) potential noise impact on sensitive receivers due to the Project and associated works, including impact from construction equipment during construction and operational noise impact;
- (iii) potential hazard to human life impact given that the Project site is within the consultation zone of the Silvermine Bay Water Treatment Works (SMBWTW);
- (iv) potential water quality impact due to the Project and associated works on relevant water system(s) including the Southern Water Control Zone and relevant water sensitive receivers during construction and operation of the Project;
- (v) potential waste management implications arising from the construction and operation of the Project, including handling and disposal of construction and demolition materials, chemical waste and general refuse;
- (vi) potential ecological impact during construction and operation of the Project, and associated works, including any indirect impact resulting in habitat loss from hill fire caused by joss burning relating to the Project;
- (vii) potential landscape and visual impacts on sensitive receivers due to the construction and operation of the Project, including consideration of alternative design that is more compatible with the surrounding landscape context from the landscape planning perspective; and
- (viii) potential cumulative environmental impacts of the Project, through interaction or in combination with other existing, committed and planned projects in the vicinity of the Project, and that those impacts may have a bearing on the environmental acceptability of the Project.

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

#### **3.3.1 Purpose(s) and Objectives of the Project**

The Applicant shall provide information on the purpose(s) and objectives of the Project,

and describe the benefit of the Project and scenarios with and without the Project.

### 3.3.2 Details of the Project

The Applicant shall indicate the nature and status of project decision(s) for which the EIA study is undertaken. The Applicant shall describe the design, size, construction methods, the nature and methods of production or other major activities involved in operation of the project, using diagrams, plans and/or maps as necessary. The estimated duration of the construction phase and operational phase of the Project together with the programme within these phases shall be given. The land taken by the Project site(s), construction sites, and any associated access arrangements, auxiliary facilities and landscaping areas shall be shown on a scaled map. The uses of the Project shall be described and the different land use areas shall be demarcated as appropriate.

### 3.3.3 Background and History of the Project

The Applicant shall provide information on the site location and site history of the Project, any related projects, and the consideration of the different practicable siting and layout options of the proposed cemetery extension works at available locations including structure with reduced heights and visibility to nearby receivers, as well as its compatibility with the surrounding landscape context. The key reasons for selecting the proposed siting and layout of the Project and the part environmental factors played in the selection shall be described. The main environmental impacts of the different practicable siting and layout options shall be compared with those of the proposed Project and with the likely future environmental conditions in the absence of the Project.

## 3.4 **Technical Requirements**

3.4.1 The Applicant shall conduct the EIA study to address the environmental aspects of the activities as described in section 3.2 above. The assessment shall be based on the best and latest information available during the course of the EIA study. The EIA report shall include the construction and operational programme as well as approaches and methodologies for assessing environmental impacts of the Project. The EIA report shall provide the time frame, staged implementation programme, and works programmes of the Project and other concurrent projects, for assessing the cumulative environmental impacts from the Project and interacting projects as identified in the EIA study.

3.4.2 The EIA study shall follow the technical requirements specified below and in the Appendices of this EIA study brief.

### 3.4.3 **Air Quality Impact**

3.4.3.1 The Applicant shall follow the criteria and guidelines for evaluating and assessing air quality impact as stated in section 1 of Annex 4 and Annex 12 of the TM respectively.

3.4.3.2 The assessment area for the air quality impact assessment shall be defined by a distance of 500 metres from the boundary of the Project and the works of the Project within the Study Area as identified in the EIA, which shall be extended to include major existing, committed and planned air pollutant emission sources identified to have a bearing on the environmental acceptability of the Project. The assessment shall include the existing, committed and

planned sensitive receivers within the assessment area. The assessment shall be based on the best available information at the time of the assessment.

3.4.3.4 The air quality impact assessment shall follow the detailed technical requirements given in Appendix A of this EIA Study Brief.

#### 3.4.4 **Noise Impact**

3.4.4.1 The Applicant shall follow the criteria and guidelines for evaluating and assessing noise impact as stated in Annexes 5 and 13 of the TM respectively.

3.4.4.2 Assessment shall include construction noise and operation noise impact assessment of the existing, committed and planned NSRs earmarked on the relevant Outline Zoning Plans, Development Permission Area Plans, Outline Development Plans, Layout Plans and other relevant published land use plans, including plans and drawings published by the Lands Department and any land use and development applications approved by the Town Planning Board, in the vicinity of the project.

3.4.4.3 The noise impact assessment for construction and operation of the Project shall follow the detailed technical requirements given in Appendix B.

#### 3.4.5 **Hazard to Human Life**

3.4.5.1 The Applicant shall follow the criteria for evaluating hazard to human life impact as stated in section 2 of Annex 4 of the TM.

3.4.5.2 The hazard to human life assessment shall follow the detailed technical requirements given in Appendix C.

#### 3.4.6 **Water Quality Impact**

3.4.6.1 The Applicant shall follow the criteria and guidelines for evaluating and assessing water pollution as stated in Annexes 6 and 14 of the TM respectively.

3.4.6.2 The assessment area for the water quality impact assessment shall cover the Southern Water Control Zone as designated under the Water Pollution Control Ordinance (Cap. 358) and the water sensitive receivers in the vicinity of the Project. The assessment area could be extended to include other areas such as stream courses, existing and new drainage system; and the associated water system(s) in the vicinity if they are found also being affected by the project during the EIA study and have a bearing on the environmental acceptability of the Project.

3.4.6.3 The water quality impact assessment shall follow the detailed technical requirements given in Appendix D.

#### 3.4.7 **Waste Management Implications**

3.4.7.1 The Applicant shall follow the criteria and guidelines for evaluating and assessing waste management implications as stated in Annexes 7 and 15 of the TM respectively.

3.4.7.2 The assessment of the waste management implications shall follow the detailed technical

requirements given in Appendix E.

### 3.4.8 **Ecological Impact (Terrestrial and Aquatic)**

3.4.8.1 The Applicant shall follow the criteria and guidelines for evaluating and assessing ecological impact as stated in Annexes 8 and 16 of the TM respectively.

3.4.8.2 The assessment area for the purpose of the ecological impact assessment shall include areas within 500 meters distance from the boundary of the Project site and the areas likely to be impacted by the Project.

3.4.8.3 The ecological impact assessment shall follow the detailed technical requirements given in Appendix F.

### 3.4.9 **Landscape and Visual Impacts**

3.4.9.1 The Applicant shall follow the criteria and guidelines as stated in section 1 of Annex 10 and Annex 18 of the TM respectively, the EIAO Guidance Note No. 8/2010 on “Preparation of Landscape and Visual Impact Assessment under the Environmental Impact Assessment Ordinance” and the report of “Landscape Value Mapping of Hong Kong” for evaluating and assessing the landscape and visual impacts.

3.4.9.2 The assessment area for landscape impact assessment shall include areas within 500 meters from the boundary of the Project site. The assessment area for the visual impact assessment shall be defined by the visual envelope of the Project.

3.4.9.3 The landscape and visual impact assessments shall follow the detailed technical requirements given in Appendix G.

### 3.4.10 **Environmental Monitoring and Audit (EM&A) Requirements**

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

3.4.10.2 Subject to the confirmation of the EIA study findings, the Applicant shall comply with the requirements as stipulated in Annex 21 of the TM.

3.4.10.3 The Applicant shall prepare a Project Implementation Schedule (in the form of a checklist as shown in Appendix H) containing the EIA study recommendations and mitigation measures with reference to the implementation programme.

## 3.5 **Presentation of Summary Information**

### 3.5.1 Summary of Environmental Outcomes

The EIA report shall contain a summary of key environmental outcomes arising from the EIA study, including estimated population protected from various environmental impacts, environmentally sensitive areas protected, environmentally friendly options considered and incorporated in the preferred option, environmental designs recommended, key environmental problems avoided, compensation areas included and the environmental



benefits of environmental protection measures recommended.

### 3.5.2 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 also form an essential part of the executive summary of the EIA report.

### 3.5.3 Documentation of Key Assessment Assumptions, Limitation of Assessment Methodologies and related Prior Agreement(s) with the Director

The EIA report shall contain a summary including the assessment methodologies and key assessment assumptions adopted in the EIA study, the limitations of these assessment(s) methodologies/assumptions, if any, plus relevant prior agreement(s) with the Director or other Authorities on individual environmental media assessment components. The proposed use of any alternative assessment tool(s) or assumption(s) have to be justified by the Applicant, with supporting documents based on cogent, scientific and objectively derived reason(s) before seeking the Director's agreement. The supporting documents shall be provided in the EIA report.

### 3.5.4 Documentation of Public Concerns

The EIA report shall contain a summary of the main concerns of the general public, special interest groups and the relevant statutory or advisory bodies received from and identified by the Applicant during the course of the EIA study, and describe how the relevant concerns have been taken into account.

## 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 the 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 provide a summary, pointing out where in the EIA report the respective requirements of this EIA Study Brief and TM (in particular Annexes 11 and 20) 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 I of this EIA study brief. The Applicant shall, upon request, make additional copies of the above

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 sub-section 1.2 of this EIA study brief and in Project Profile (No. PP-526/2015), 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:

Figure 1 – Project Location Plan

Appendix A – Requirements for Air Quality Impact Assessment

Appendix A-1 – Air Quality Modelling Guidelines

Appendix B – Requirements for Noise Impact Assessment

Appendix C – Requirements for Assessment of Hazard to Human Life

Appendix D – Water Quality Impact Assessment Requirements

Appendix E – Requirements for Assessment of Waste Management Implications

Appendix F – Requirements for Ecological Impact Assessment (Terrestrial and Aquatic)

Appendix G – Requirements for Landscape and Visual Impact Assessments

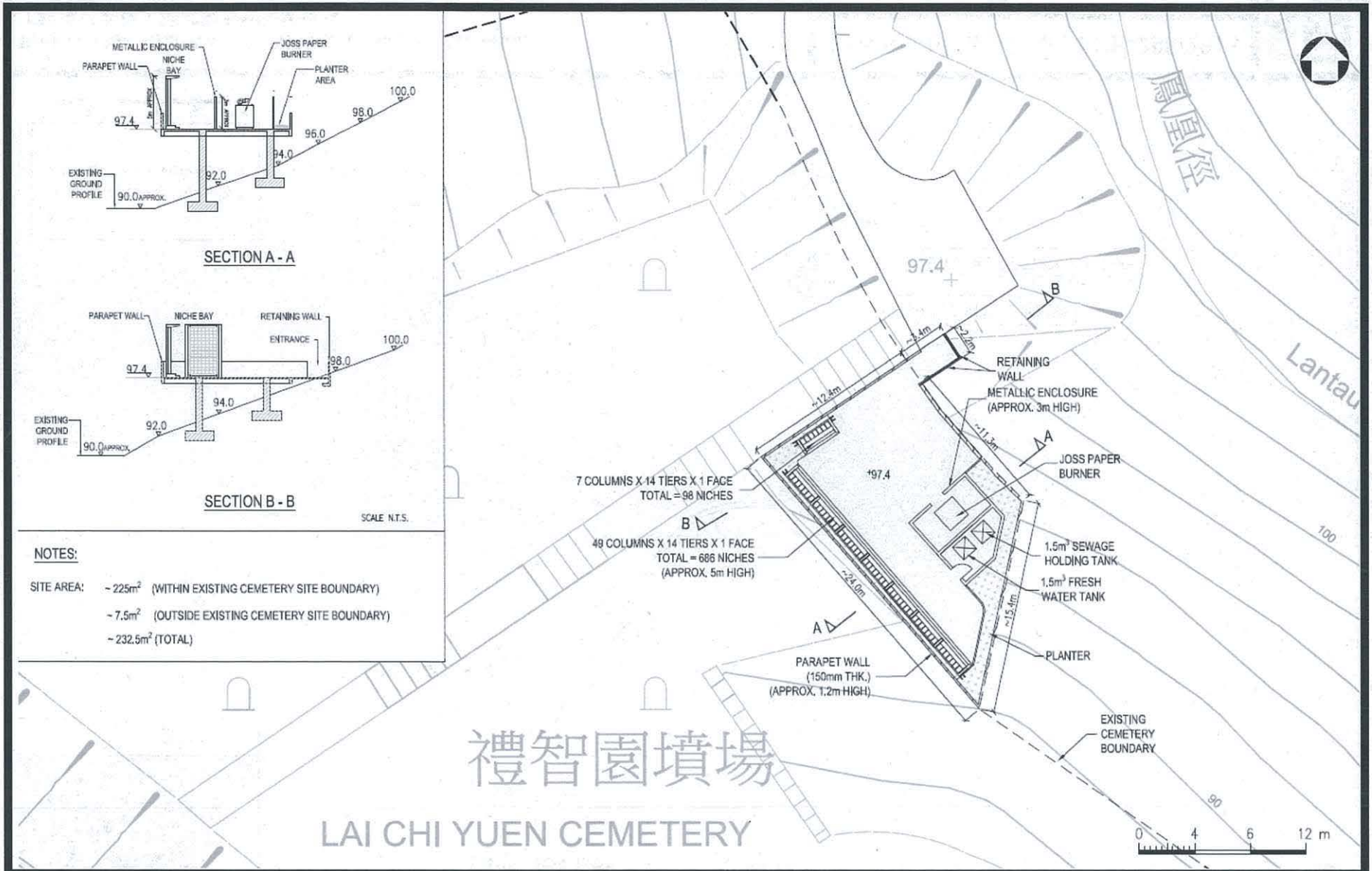
Appendix H – Implementation Schedule

Appendix I – Requirements for EIA Report Documents

--- END OF EIA STUDY BRIEF ---

August 2015  
Environmental Assessment Division  
Environmental Protection Department





**Project Title: Mui Wo Lai Chi Yuen Cemetery Extension**

工程項目名稱：梅窩禮智園墳場擴建

Layout Plan (布局圖) [ Originated from the Figure 2 of Project Profile No. PP- 526/2015 ]

**EIA Study Brief No.: ESB-288/2015**

**Figure 2**



**Appendix A****Requirements for Air Quality Impact Assessment**

The air quality impact assessment shall include the following:

**1. Background and Analysis of Activities**

- (a) Provision of background information relating to air quality issues relevant to the Project, e.g. description of the types of activities of the Project that may affect air quality during construction and operation stages of the Project.
- (b) Provision of an account, where appropriate, of the consideration/measures that had been taken into consideration in the planning of the Project to abate the air pollution impact. The Applicant shall consider alternative construction methods/phasing programmes, and alternative operation modes to minimize the air quality impact during construction and operation stages of the Project.
- (c) Presentation of background air quality levels in the assessment area for the purpose of evaluating cumulative air quality impacts during construction and operation stages of the Project. If PATH (Pollutants in the Atmosphere and their Transport over Hong Kong) model is used to estimate the background air quality, details for the estimation of the emission sources to be adopted in the model runs should be clearly presented.

**2. Identification of Air Sensitive Receivers (ASRs) and Examination of Emission / Dispersion Characteristics**

- (i) Identification and description of existing, planned and committed ASRs that would likely be affected by the Project, including those earmarked on the relevant Outline Zoning Plans, Development Permission Area Plans, Outline Development Plans and Layout Plans and other relevant published land use plans, including plans and drawings published by Lands Department and any land use and development applications approved by the Town Planning Board. The Applicant shall select the assessment points of the identified ASRs that represent the worst impact point of these ASRs. A map clearly showing the location and description such as name of buildings, their uses and height of the selected assessment points shall be given. The separation distances of these ASRs from the nearest emission sources of the Project shall also be given.
- (ii) Provision of a list of air pollution emission sources, which are related to the Project based on the analysis of the construction and operational activities in section 1 above. Examples of construction stage emission sources include those from site formation works, erection of retaining walls and construction of new niches and ancillary facilities, vehicular movements on haul roads on site, etc. Examples of operational stage emission sources include exhaust emissions from joss paper burner, etc. Confirmation regarding the validity of the assumptions adopted and the magnitude of the activities (e.g. volume of construction material handled, etc.) shall be obtained from the relevant government departments / authorities and documented.
- (iii) Identification of other sources as well as any concurrent projects which are likely to have a significant impact to the assessment area during the course of the EIA study for

incorporation into the assessment of the potential air quality impact. The impact as affecting the existing, committed and planned ASRs within the assessment area shall be assessed, based on the best information available at the time of assessment.

### 3. Construction Phase Air Quality Impact

- (i) The Applicant shall follow the requirements stipulated under the Air Pollution Control (Construction Dust) Regulation to ensure that construction dust impacts are controlled within the relevant standards as stipulated in Section 1 of Annex 4 of the TM.
- (ii) If the Applicant anticipates that the Project will give rise to significant construction dust impacts likely to exceed recommended limits in the TM at the ASRs despite the incorporation of the dust control measures proposed, a quantitative assessment should be carried out to evaluate the construction dust impact at the identified ASRs. The Applicant shall follow the methodology set out in section 5 below when carrying out the quantitative assessment.
- (iii) A monitoring and audit programme for the construction phase of the Project shall be devised to verify the effectiveness of the control measures proposed so as to ensure proper construction dust control.

### 4. Operational Phase Air Quality Impact

- (i) The Applicant shall assess the potential air quality impacts at the identified ASRs arising from the operation of the Project based on an assumed reasonably worst-case scenario under normal operating conditions. The evaluation shall be based on the strength of the emission sources identified in section 2 above.
- (ii) If the Applicant anticipates that the Project will give rise to significant operational phase air quality impacts likely to exceed the recommended limits in the TM at the ASRs, a quantitative assessment should be carried out to evaluate the operational phase air quality impacts at the identified ASRs. The Applicant shall follow the methodology set out in Section 5 below when carrying out the quantitative assessment.
- (iii) A monitoring and audit programme for the operational stage shall be devised to verify the effectiveness of the proposed control measures so as to ensure proper control of operational air quality impacts.

### 5. Quantitative Assessment Methodology

- (i) If quantitative assessment is required, the Applicant should follow the relevant methodology set out below when carrying out the assessment:
- (ii) The Applicant shall apply the general principles enunciated in the modelling guidelines in Appendix A-1 while making allowance for the specific characteristic of the Project. This specific methodology must be documented in such level of details, preferably assisted with tables and diagrams, to allow the readers of the EIA report to grasp how the model has been set up to simulate the situation under study without referring to the model input files.
- (iii) For the purpose of assessing the compliance with the criteria as stated in section 1 of

Annex 4 of the TM, the Applicant shall identify the key/representative air pollution parameters (types of pollutants and averaging time concentrations) to be evaluated and provide explanation for selecting these parameters for assessing the impact of the Project.

- (iv) Calculation of the relevant pollution emission rates for input into the model, a summary table of the emission rates and a map showing the emission sources shall be presented in the EIA report. The Applicant must ensure consistency between the text description and the model files at every stage of submissions for review. In case of doubt, prior agreement between the Applicant and the Director on the specific modelling details should be sought.
- (v) For on-road vehicle emissions, the Applicant may use the EMFAC-HK model to determine the Fleet Average Emission Factors, taking into account vehicle fleet mix and traffic speed, or other models as agreed by the Director. The traffic flow data and assumptions, such as the exhaust technology fractions, vehicle age/population distribution, traffic forecast and speed fractions, that are used in the assessment shall be presented in the form of both summary table(s) and graph(s).
- (vi) For estimating the future background air quality, the Applicant may use EPD's PATH model or results, taking into consideration the major air pollutant emission sources projected for Hong Kong and nearby region, or other models as agreed by the Director. Details of the adopted emission sources should be presented.
- (vii) Ozone Limiting Method (OLM) or Discrete Parcel Method (DPM) or other method to be agreed with the Director shall be used to estimate the conversion ratio of  $\text{NO}_x$  to  $\text{NO}_2$  if  $\text{NO}_2$  has been identified as a key air pollutant.
- (viii) The Applicant shall calculate the overall cumulative air quality impact at the ASRs identified under section 2 above and compare these results against the criteria set out in Section 1 of Annex 4 in the TM. The predicted air quality impacts (both unmitigated and mitigated) shall be presented in the form of summary table(s) and pollution contours, to be evaluated against the relevant air quality standards and on any effect they may have on the land use implications. Plans of a suitable scale should be used to present pollution contours to allow buffer distance requirements to be determined properly.

## 6. Mitigation Measures for Air Quality Impact

### Consideration for Mitigation Measures

- (i) Where the predicted air quality impact exceeds the criteria set in section 1 of Annex 4 in the TM, the Applicant shall consider mitigation measures to reduce the air quality impact on the identified ASRs. The feasibility, practicability, programming and effectiveness of the recommended mitigation measures shall be assessed and documented in the EIA report. Specific reasons for not adopting certain workable mitigation measures to reduce the air quality to a level meeting the criteria in the TM or to maximise the protection of the ASRs as far as possible should be clearly substantiated and documented in the EIA report.

### Evaluation of Residual Air Quality Impact

- (ii) Upon consideration of mitigation measures, if the mitigated air quality impact still exceeds the relevant criteria in section 1 of Annex 4 of TM, the Applicant shall identify, predict, evaluate the residual air quality impact in accordance with Section 4.4.3 of the TM and estimate the total number of existing dwellings, classrooms and other air sensitive elements that will be exposed to residual air quality impacts exceeding the criteria set in section 1 of Annex 4 in the TM.

### 7. Submission of Emission Calculation Details and Model Files

Input and output file(s) of model run(s) including those files for generating the pollution contours and emission calculation work sheets shall be submitted to the Director in electronic format together with the submission of the EIA report.



**Appendix A-1****Air Quality Modelling Guidelines**

*[The information contained in this Appendix is meant to assist the Applicant in performing the air quality assessment. The Applicant must exercise professional judgment in applying this general information.]*

The air quality modelling guidelines shall include the following guidelines as published on the website of the Environmental Protection Department:

([http://www.epd.gov.hk/epd/english/environmentinhk/air/guide\\_ref/guide\\_aqa\\_model.html](http://www.epd.gov.hk/epd/english/environmentinhk/air/guide_ref/guide_aqa_model.html)):

- i) Guidelines on Choice of Models and Model Parameters;
- ii) Guidelines on Assessing the “Total” Air Quality Impact (Revised);
- iii) Guidelines on the Use of Alternative Computer Models in Air Quality Assessment (Revised);
- iv) Guidelines on the Estimation of PM<sub>2.5</sub> for Air Quality Assessment in Hong Kong; and
- v) Guidelines on the Estimation of 10-minute Average SO<sub>2</sub> Concentration for Air Quality Assessment in Hong Kong.

**Appendix B****Requirements for Noise Impact Assessment**

The noise impact assessment shall include the following:

**1. Description of the Noise Environment**

- 1.1. The Applicant shall describe the prevailing noise environment in the EIA report.
- 1.2. The Applicant shall conduct prevailing background noise surveys to determine the standards for evaluating noise impact from fixed noise source. The respective noise environment should be documented in the EIA report.

**2. Construction Noise Impact Assessment****2.1 Construction Noise Impact Assessment Methodology**

- 2.1.1 The Applicant shall carry out construction noise impact assessment (excluding percussive piling) of the Project during daytime, i.e. 7am to 7pm, on weekdays other than general holidays in accordance with methodology in paragraphs 5.3 and 5.4 of Annex 13 of the TM.
- 2.1.2 For ground-borne construction noise impact, the Applicant shall propose assessment methodology and computational model which shall be confirmed with the Director, with reference to Section 4.4.2 of the TM, prior to the commencement of the assessment. Site measurements at appropriate locations may be required in order to obtain the empirical input parameters required in the computational model.

**2.2 Identification of Construction Noise Impact****2.2.1 Identification of Assessment Area and Noise Sensitive Receivers**

- (a) The Applicant shall propose the assessment area for agreement of the Director before commencing the assessment. The assessment area for the construction noise impact assessment shall generally include areas within 300 metres from the boundary of the Project and the works of the Project.
- (b) The Applicant shall identify all existing NSRs in the assessment area and select assessment points to represent identified NSRs for carrying out quantitative construction noise impact assessment described below.
- (c) The assessment points shall be confirmed with the Director prior to the commencement of the quantitative construction noise impact assessment and may be varied subject to the best and latest information available during the course of the EIA study.
- (d) A map showing the location and description such as name of building, use, and floor of each and every selected assessment point shall be given. Photographs of existing NSRs shall be appended to the EIA report.

**2.2.2 Inventory of Noise Sources**

The Applicant shall identify and quantify an inventory of noise sources for representative construction equipment for the purpose of construction noise impact assessment.

## 2.3 Prediction and Evaluation of Construction Noise Impact

### 2.3.1 Phases of Construction

The Applicant shall identify representative phases of construction that would have noticeable varying construction noise emissions at existing NSRs at the assessment area for agreement of the Director before commencing the construction noise impact assessment.

### 2.3.2 Scenarios

The Applicant shall quantitatively assess the construction noise impact, with respect to criteria set in Annex 5 of the TM, of unmitigated scenario and mitigated scenario at different phases of construction of the Project.

### 2.3.3 Prediction of Noise Impact

- (a) The Applicant shall present the predicted noise levels in Leq (30 min) dB(A) at the selected assessment points at various representative floor levels (in m P.D.) on tables and plans of suitable scale.
- (b) The assessment shall cover the cumulative construction noise impact resulting from the construction works of the Project and other concurrent projects identified during the course of the EIA study on existing NSRs within the assessment area.
- (c) The potential construction noise impact under different phases of construction shall be quantified by estimating the total number of dwellings, classrooms and other noise sensitive receivers that will be exposed to noise impact exceeding the criteria set in Annex 5 in the TM.
- (d) The Applicant shall, as far as practicable, formulate a reasonable construction programme so that no work will be required in restricted hours as defined under the Noise Control Ordinance (NCO). In case the Applicant needs to evaluate whether construction works in restricted hours as defined under the NCO are feasible or not in the context of programming construction works, reference should be made to relevant technical memoranda issued under the NCO. Regardless of the results of construction noise impact assessment for restricted hours, the Noise Control Authority will process Construction Noise Permit (CNP) application, if necessary, based on the NCO, the relevant technical memoranda issued under the NCO, and the contemporary conditions/situations. This aspect should be explicitly stated in the noise chapter and the conclusions and recommendations chapter in EIA report.

## 2.4 Mitigation of Construction Noise Impact

### Direct Mitigation Measures

Where the predicted construction noise impact exceeds the criteria set in Table 1B of Annex 5, TM, the Applicant shall consider and evaluate direct mitigation measures including but not limited to, movable barriers, enclosures, quieter alternative methods, re-scheduling, restricting hours of operation of noisy tasks, etc. The feasibility, practicability, programming and effectiveness of the recommended mitigation measures shall be assessed. Any direct mitigation measures recommended should be well documented in the report. Specific reasons for not adopting certain direct mitigation measures to reduce the noise to a level meeting the criteria in the TM or to maximize the protection for the NSRs as far as possible should be clearly substantiated and documented in the EIA report.

## 2.5 Evaluation of Residual Construction Noise Impact

Upon exhaust of direct mitigation measures, if the mitigated noise impact still exceeds the relevant

criteria in Annex 5 of TM, the Applicant shall identify, predict, evaluate the residual construction noise impact in accordance with Section 4.4.3 of the TM and estimate the total number of existing dwellings, classrooms and other noise sensitive elements that will be exposed to residual noise impact exceeding the criteria set in Annex 5 in the TM.

### **3. Operation Noise Impact Assessment**

#### **3.1 Fixed Noise Sources Impact Assessment Methodology**

3.1.1 The Applicant shall carry out fixed noise sources impact assessment from the Project in accordance with methodology in paragraph 5.2 of Annex 13 of the TM.

#### **3.2 Identification of Fixed Noise Sources Impact**

##### **3.2.1 Identification of Assessment Area and Noise Sensitive Receivers**

- (a) The Applicant shall propose the assessment area for agreement of the Director before commencing the assessment. The assessment area for the fixed noise impact shall generally include areas within 300 metres from the boundary of the Project and the works of the Project.
- (b) The Applicant shall identify all existing, committed and planned NSRs in the assessment area and select assessment points to represent identified NSRs for carrying out fixed noise sources impact assessment described below.
- (c) The assessment points shall be confirmed with the Director prior to the commencement of the quantitative fixed noise sources impact assessment and may be varied subject to the best and latest information available during the course of the EIA study.
- (d) A map showing the location and description such as name of building, use, and floor of each and every selected assessment point shall be given. Photographs of existing NSRs shall be appended to the EIA report.
- (e) For planned noise sensitive land uses without committed site layouts, the Applicant should use the relevant landuse and planning parameters and conditions to work out representative site layouts for fixed noise sources assessment purpose. However, such parameters and conditions together with any constraints identified shall be confirmed with the relevant responsible parties including Planning Department and Lands Department.

##### **3.2.2 Inventory of Noise Sources**

- (a) The Applicant shall identify and quantify an inventory of noise sources for fixed noise sources impact assessment. The inventory of noise sources shall include, but not limited to noise associated with any permanent and temporary industrial noise sources including pump room, generator room, transformer room, public transport facilities, ventilation system(s) of building(s) and/or tunnel(s), and electricity substation(s), etc.
- (b) The Applicant shall provide document or certificate, accepted by recognized national/international organization, for the sound power level of each type of fixed noise sources.
- (c) Validity of the inventory shall be confirmed with the relevant government departments/authorities and documented in the EIA report.

### 3.3 Prediction and Evaluation of Fixed Noise Sources Impact

#### 3.3.1 Scenarios

- (a) The Applicant shall quantitatively assess the fixed noise sources impact with respect to criteria set in Annex 5 of the TM, of unmitigated scenario and mitigated scenario at assessment years of various operation modes including, but not limited to,
  - (i) the worst operation mode which represents the maximum noise emission in connection of identified noise sources of the Project; and
  - (ii) any other operation modes as confirmed with the Director.
- (b) Validity of the above operational modes shall be confirmed with relevant departments/authorities and documented in the EIA report.

#### 3.3.2 Prediction of Noise Impact

- (a) The Applicant shall present the predicted noise levels in Leq (30 min) at the selected assessment points at various representative floor levels (in m P.D.) on tables and plans of suitable scale.
- (b) The assessment shall cover the cumulative fixed noise sources impact associated with the operation of the proposed project on existing, committed and planned NSRs within the assessment area.
- (c) The potential fixed noise sources impact under different scenarios shall be quantified by estimating the total number of dwellings, classrooms and other noise sensitive receivers that will be exposed to noise impact exceeding the criteria set in Annex 5 in the TM.

### 3.4 Mitigation of Fixed Noise Sources Impact

#### 3.4.1 Direct Mitigation Measures

Where the predicted fixed noise sources impact exceeds the criteria set in Table 1A of Annex 5, TM, the Applicant shall consider and evaluate direct mitigation measures including but not limited to noise barrier/enclosure, screening by noise tolerant buildings, etc. The feasibility, practicability, programming and effectiveness of the recommended mitigation measures shall be assessed. Any direct mitigation measures recommended should be well documented in the report. Specific reasons for not adopting certain direct mitigation measures to reduce the noise to a level meeting the criteria in the TM or to maximize the protection for the NSRs as far as possible should be clearly substantiated and documented in the EIA report.

### 3.5 Evaluation of Residual Fixed Noise Sources Impact

- 3.5.1 Upon exhaust of direct mitigation measures, if the mitigated noise impact still exceeds the relevant criteria in Annex 5 of TM, the Applicant shall identify, predict, evaluate the residual fixed noise sources impact in accordance with Section 4.4.3 of the TM and estimate the total number of existing dwellings, classrooms and other noise sensitive elements that will be exposed to residual noise impact exceeding the criteria set in Annex 5 in the TM.

**Appendix C****Requirements for Assessment of Hazard to Human Life**

1. The Applicant shall carry out hazard assessment to evaluate potential hazard to life during construction and operation stages of the Project due to Silvermine Bay Water Treatment Works (SMBWTW). The hazard assessment shall include the following
  - (i) Identify hazardous scenarios associated with the transport, storage and use of chlorine at SMBWTW 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 shall be agreed with the Director and should be consistent with previous studies having similar issues (e.g. Integration of Siu Ho Wan and Silver Mine Bay Water Treatment Works).

**Appendix D****Water Quality Impact Assessment Requirements**

1. The Applicant shall identify and analyse physical, chemical and biological disruptions of the water system(s) arising from the construction and operation of the Project.
2. The Applicant shall predict, quantify and assess any water quality impacts arising from the construction and operation of the Project. The prediction shall include possible different construction stages or sequences of the Project. Affected sensitive receivers shall be identified by the assessment tool with indications of degree of severity.
3. The Applicant shall address water quality impacts due to the construction phase and operational phase of the Project. Essentially, the assessment shall address the following :
  - (i) Collect and review background information on affected existing and planned water systems, their respective catchments and sensitive receivers which might be affected by the Project;
  - (ii) Characterize water quality of the water systems and sensitive receivers, which might be affected by the Project based on existing best available information or through appropriate site survey and tests;
  - (iii) Identify and analyse relevant existing and planned future activities, beneficial uses and water sensitive receivers related to the affected water system(s). The Applicant should refer to, *inter alia*, those developments and uses earmarked on the relevant Outline Zoning Plans, Development Permission Area Plans, Outline Development Plans and Layout Plans, and any other relevant published landuse plans;
  - (iv) Identify pertinent water quality objectives and establish other appropriate water quality criteria or standards for the water system(s) and the sensitive receivers identified in (i), (ii) & (iii) above;
  - (v) Review the specific construction methods and configurations, and operation of the Project to identify and predict the likely water quality impacts arising from the Project;
  - (vi) Identify any alternation of any water courses, natural streams, ponds, wetlands, change of water holding/flow regimes, change of catchment types or areas, erosion or sedimentation due to the Project and any other hydrological changes in the assessment area;
  - (vii) Identify and quantify existing and likely future water pollution sources, including point discharges and non-point sources to surface water runoff, sewage from workforce and polluted discharge generated from the Project.
  - (viii) Provide an emission inventory on the quantities and characteristics of these existing and future pollution sources in the assessment area. Field investigation and laboratory test, shall be conducted as appropriate to fill relevant information gaps;

- (ix) Predict and quantify the impacts on the water system(s) and their sensitive receivers due to those alternations and changes identified in (v) above and the pollution sources identified in (vii) above. The prediction shall take into account and include possible different construction and operation stages of the Project.
- (x) Assess the cumulative impacts due to other related concurrent and planned projects, activities or pollution sources within the assessment area that may have a bearing on the environmental acceptability of the Project;
- (xi) Analyze the provision and adequacy of existing and planned future facilities to reduce pollution arising from the point and non-point sources identified in (vii) above;
- (xii) Develop effective infrastructure upgrading or provision, contingency plan, water pollution prevention and mitigation measures to be implemented during construction and operation stages, including emergency sewage discharge, so as to reduce the water quality impacts.
- (xiii) Investigate and develop best management practices to reduce storm water and non-point source pollution as appropriate; and
- (xiv) Evaluate and quantify residual impacts on water system(s) and the sensitive receivers with regard to the appropriate water quality objectives, criteria, standards or guidelines.



**Appendix E****Requirements for Assessment of Waste Management Implications**

The assessment of waste management implications shall cover the following:

**1. Analysis of Activities and Waste Generation**

- (i) The Applicant shall identify the quantity, quality and timing of the waste arising as a result of the construction and operation activities of the Project based on the sequence and duration of these activities, e.g. construction and demolition materials (C&DM) and other wastes which will be generated during construction and operational stages.
- (ii) The Applicant shall adopt appropriate design, general layout, construction methods and programme to minimize the generation of public fill/inert C&DM and maximize the use of public fill/inert C&DM for other construction works.

**2. Proposal for Waste Management**

- (i) Prior to considering the disposal options for various types of wastes, opportunities for reducing waste generation, on-site or off-site re-use and recycling shall be fully evaluated. Measures which can be taken in planning and design stages e.g. by modifying the design approach and in the construction stage for maximizing waste reduction shall be separately considered.
- (ii) After considering the opportunities for reducing waste generation and maximizing re-use, the types and quantities of the wastes required to be disposed of as a consequence shall be estimated and the disposal methods/options for each type of wastes shall be described in detail. The disposal methods/options recommended for each type of wastes shall take into account of the result of the assessment in (iv) below.
- (iii) The impact caused by handling (including stockpiling, labelling, packaging and storage), collection, transportation and re-use/disposal of wastes shall be addressed in detail and appropriate mitigation measures shall be proposed. This assessment shall cover the following areas :
  - potential hazard;
  - air and odour emissions;
  - noise;
  - wastewater discharge;
  - ecology; and
  - public transport.

**Appendix F****Requirements for Ecological Impact Assessment (Terrestrial and Aquatic)**

1. The Applicant shall examine the flora, fauna and other components of the ecological habitats within the assessment area. The aim shall be to protect, maintain or rehabilitate the natural environment. In particular, the Project shall avoid as far as possible impacts on recognized sites of conservation importance and other ecological sensitive areas. The assessment shall identify and quantify as far as possible the potential ecological impacts associated with the Project, both directly by physical disturbance and indirectly by potential impacts such as changes of water quality and hydrodynamic regime to the natural environment and the associated wildlife groups and habitats / species arising from the Project including its construction phases as well as the subsequent management and maintenance of the proposals.
2. The assessment shall include the following major tasks:
  - (i) review the findings of relevant studies / surveys and collate the available information regarding the ecological characters of the assessment area;
  - (ii) evaluate the information collected, identify any information gap relating to the assessment of potential ecological impacts to terrestrial and aquatic environment, and determine the ecological field surveys and investigations that are needed for a comprehensive assessment as required under the following sections;
  - (iii) carry out any necessary ecological field surveys with a duration of a least 6 months covering wet season and investigations to verify the information collected, fill in the information gaps as identified under sub-section (ii) above, if any, and to fulfil the objectives of the EIA study. The field surveys shall include but not be limited to flora, fauna and any other habitats/species of conservation importance;
  - (iv) establish the general ecological profile of the assessment area based on information collected in the tasks mentioned in sub-section (i) to (iii) above, and describe the characteristics of each habitat found; the data set should be comprehensive and representative covering the variations of the wet and dry seasons, and is up to date and valid for the purpose of this assessment. Major information to be provided shall include :
    - (a) description of the physical environment, including all recognized sites of conservation importance and assessment of whether these sites will be affected by the Project or not;
    - (b) habitat maps of suitable scale (1:1000 to 1:5000) showing the types and locations of habitats and species of conservation interest in the assessment area;
    - (c) ecological characteristics of each habitat type such as size, vegetation type, species present, dominant species found, species richness and abundance of major taxa groups, seasonal patterns, inter-dependence of the habitats and species, and presence of any features of ecological importance;
    - (d) representative colour photos of each habitat type and any important ecological features identified; and
    - (e) species found that are rare, endangered and/or listed under local legislation, international conventions for conservation of wildlife / habitats or Red Data

### Books.

- (v) investigate and describe the existing wildlife uses of various habitats with special attention to those wildlife groups and habitats with conservation interest, including but not limited to the following:
  - (a) woodlands and plantations;
  - (b) wetlands including wet agricultural land, watercourses and associated riparian habitats;
  - (c) linkages of habitats within the assessment area;
  - (d) avifauna including raptors, woodland and wetland dependent migratory bird species;
  - (e) mammals
  - (f) herpetofauna;
  - (g) insects (e.g. butterflies and dragonflies);
  - (h) watercourse associated species (e.g. fish and crustaceans); and
  - (i) any other habitats / species identified as having special conservation interest by this EIA study.
  
- (vi) describe recognized site of conservation importance in the assessment area, if any, and assess whether these site will be affected by the Project or not.
  
- (vii) using suitable methodology, and considering also any works activities from other projects reasonably likely to occur at the time, identify and quantify as far as possible any direct (e.g. loss of habitats due to various elements such as excavation works and other associated works of the Project), indirect (e.g. changes in water qualities, hydrology, accidental discharge of untreated sewage, noise and other disturbance generated by the construction and operational activities, hillfire, etc), on-site, off-site, primary, secondary and cumulative ecological impacts on the wildlife groups and habitats identified such as destruction of habitats, reduction of species abundance/diversity, loss of feeding and breeding grounds, habitat fragmentation, in particular the following:
  - (a) loss of habitats such as woodlands, wetlands and agricultural land;
  - (b) disturbance to animals and plants;
  - (c) impacts due to habitat fragmentation and isolation;
  - (d) impacts due to potential changes in water quality, hydrodynamics properties and hydrology on wetlands and riparian habitats during the construction and operation (if applicable, and decommissioning) stages of the Project;
  - (e) impacts due to increase in human activities and disturbance during the construction and operation (if applicable, and decommissioning) stages of the Project such as increase in light intensity;
  - (f) cumulative impacts due to other planned and committed concurrent development projects at or near the Project area.
  
- (viii) evaluate ecological impact based on the best and latest information available during the course of the EIA study, using quantitative approach as far as practicable and covering construction and operational phases of the Project as well as the subsequent management and maintenance requirement of the Project;
  
- (ix) recommend possible alternatives, such as layer, design and alignment of the Project and modification / change of construction methods, and practicable mitigation measures to

avoid, minimize and/or compensate for the adverse ecological impacts identified during construction and operation of the Project;

- (x) evaluate feasibility and effectiveness of the recommended mitigation measures and definition of the scope, type, location, implementation arrangement, resources requirement, subsequent management and maintenance of such measures;
- (xi) determine and quantify as far as possible of the residual ecological impacts after implementation of the proposed mitigation measures;
- (xii) evaluate the severity and acceptability of the residual ecological impacts using well-defined criteria in Annex 8 of the TM and determine if off-site mitigation measures are necessary to mitigate the residual impacts and if affirmative, guidelines and requirements laid down in Annex 16 of the TM should be followed; and
- (xiii) review the need for and recommend any ecological monitoring programme required.

**Appendix G****Requirements for Landscape and Visual Impact Assessments**

1. The Applicant shall follow the criteria and guidelines as stated in the TM and EIAO Guidance Note No. 8/2010, in particular section 3.7 (f) to (j) of the EIAO Guidance Note No. 8/2010, for the landscape and visual impact assessment.
2. The Applicant shall review relevant outline development plan(s), outline zoning plan(s), layout plan(s) or planning briefs and studies which may identify areas of high landscape value, e.g. green belt and woodland areas with sensitive landscape designations and visually sensitive areas/receivers. Any guidelines on landscape strategy, landscape framework, urban design concept, building height profiles, designed view corridors, open space network and landscape link that may affect the appreciation of the Project shall also be reviewed. The aim is to gain an insight to the future outlook of the area affected so as to assess whether the Project can fit into the surrounding setting. Any conflict with statutory town plan(s) shall be highlighted and appropriate follow-up action shall be recommended.
3. The Applicant shall describe, appraise, analyze and evaluate the existing and planned landscape resources and character of the assessment area. e.g. vegetation, woodland, streams and topography, etc. A system shall be derived for judging landscape impact significance as required under the TM and EIAO Guidance Note No. 8/2010. Annotated oblique aerial photographs and plans of suitable scale showing the baseline landscape resources and landscape character areas and mapping of impact assessment shall be extensively used to present the findings of impact assessment. Descriptive text shall provide a concise and reasoned judgment from a landscape and visual point of view. The assessment shall be particularly focused on the sensitivity and magnitude of change of the landscape resources and character. An evaluation matrix shall be derived for judging impact significance. The Applicant shall identify the degree of compatibility of the Project with the existing and planned landscape settings. The landscape impact assessment shall quantify potential landscape impact as far as possible, so as to illustrate the significance of such impact arising from the Project. Clear mapping of the landscape impact is required. A broad brush tree survey to identify dominant tree species, maturity, rarity and any plant species of conservation interest, etc. should be conducted within the assessment area to provide baseline information on the landscape resources and landscape character areas and the impacts on existing trees shall be summarized. Cumulative landscape and visual impacts of the Project with other existing, committed and planned developments in the assessment area shall be assessed.
4. The Applicant shall assess the visual impacts of the proposed Project. Clear illustration including mapping of visual impact is required. The assessment shall adopt a systematic methodology and include the following:
  - (i) Identification and plotting of visual envelope of the Project;
  - (ii) Identification of the key groups of existing and planned sensitive receivers within the visual envelope and their views at both ground level and elevated vantage points. Among other receivers, sensitive receivers shall include, but not limited to nearby residents and villagers, recreational visitors such as visitors to the Lantau South Country Park and hikers of the Lantau Trail. Both long distance view and short distance view shall be covered in the assessment;

- (iii) The assessment shall take into account the factors affecting the sensitivity of receivers (including value and quality of existing views, availability and amenity alternative views, type and estimated number of receiver population, duration of view and degree of visibility) and the magnitude of change of view (including compatibility of the project with the surrounding landscape and planned setting, duration of impacts under construction and operation phases, scale of development, reversibility of change, viewing distance and potential blockage of view) for evaluating of visual impacts. The visual impacts of the Project with and without mitigation measures shall also be included so as to demonstrate the effectiveness of the proposed mitigation measures;
  - (iv) Clear evaluations and explanation with supportive arguments of all relevant factors considered in arriving the significance thresholds of visual impacts.
5. The Applicant shall evaluate the merit and demerit of preservation in totality, in parts or total destruction of existing landscape and the establishment of a new landscape character area. Alternative location, site layout, development options, design and construction method that would avoid or reduce the identified landscape and visuals impacts shall first be considered and be evaluated for comparison before adopting other mitigation or compensatory measures to alleviate the impacts. The mitigation measures proposed shall not only be concerned with damage reduction but shall also consider compatibility of design with the surrounding area in order to enhance the existing landscape and visual quality. The Applicant shall recommend mitigation measures to mitigate the adverse impact on existing landscape resources and characters, including provision of a landscape mitigation plan with annotation of the proposed mitigation measures for landscape resources and landscape character areas.
6. The mitigation measures shall also include the preservation of vegetation, transplanting of trees of good amenity value, re-provision of screen planting, landscape reinstatement of disturbed lands, compensatory planting, design of structure, provision of finishes to structure, colour scheme and texture of material used and any measures to mitigate the disturbance of the existing land use. Parties shall be identified for the on-going management and maintenance of the proposed mitigation works to ensure their effectiveness throughout the operation phase of the Project. A practical programme and funding proposal for the implementation of the recommended measures shall be provided.
7. Annotated illustration such as coloured perspective drawings, plans and section/elevation diagrams, oblique aerial photographs, photographs taken at vantage points and computer-generated photomontage, particularly from but not limited to the most severely affected vantage points shall be adopted to illustrate the significance of the landscape and visual impacts of the Project in four stages i.e. existing conditions, unmitigated impacts at Day 1, mitigated impacts at Day 1 and residual impact at Year 10. Options of design schemes should be illustrated with photomontages to show the visual impact on the surrounding areas. True colour samples may be requested if found necessary and appropriate. Technical details in preparing the illustration, which may need to be submitted for verification of accuracy of the illustration shall be recorded. Computer graphics shall be compatible with Microstation DGN file format.

**Appendix H**

**IMPLEMENTATION SCHEDULE**

EIA * Ref.	EM&A Log Ref.	Environmental Protection Measures*	Location/Duration of measures/  Timing of completion of measures	Implementation  Agent	Implementation Stage **				Relevant Legislation & Guidelines
					Des	C	O	Dec	

\* 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; Dec=Decommissioning

**Appendix I****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) 50 copies of the EIA report in English and 80 copies of the executive summary (each bilingual in both English and Chinese) 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 in English and 50 copies of the executive summary (each bilingual in both English and Chinese) 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. In addition, to facilitate public inspection of EIA report via EIAO Internet Website, the Applicant shall provide electronic copies of both the EIA report and executive summary prepared in HyperText Markup Language (HTML) (version 4.0 or later) and in Portable Document Format (PDF version 1.3 or later), unless otherwise agreed by the Director. For the HTML version, a content page capable of providing hyperlink to each section and sub-section of the EIA report and executive summary shall be included in the beginning of the document. Hyperlinks to figures, drawings and tables in the EIA report and 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 unless otherwise agreed 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 and their format shall be agreed by the Director.