

Appendix 2.1

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**EIA Study Brief ESB-  
114/2004**

**Appendix 1: Environmental Impact Assessment Ordinance (Cap. 499)  
Section 5 (7)**

**Environmental Impact Assessment Study Brief No. ESB- 114/2004**

**Project Title: North-east New Territories (NENT) Landfill Extension**

**Name of Applicant: Waste Facilities Business Unit (WFBU)  
of Environmental Protection Department**

**1. BACKGROUND**

- 1.1 An application (No. ESB-114/2004) 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 April 2004 with a project profile (No. PP-211/2004) (the Project Profile).
- 1.2 The Project comprises the development, management, operation, restoration and aftercare of the NENT Landfill Extension. The location of the proposed NENT Landfill extension site is indicated in Appendix A. Details of the Project are described as follows:
- (i) Developing an extension site of about 70 hectares with a filling capacity of about 19 million cubic metres on the eastern side of the existing NENT Landfill.
  - (ii) Carrying out site formation and preparation; installation of liner system; leachate collection, treatment and disposal; gas collection and management; utilities provisions; drainage diversion; restoration and aftercare.
  - (iii) Implementing any necessary environmental mitigation measures as well as environmental monitoring and auditing programme to be recommended in the EIA Study.
- 1.3 The Project is a designated project under Schedule 2, G.1, of the EIAO: "*A landfill for waste as defined in the Waste Disposal Ordinance (Cap. 354)*".
- 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, operation, restoration and aftercare stages of the proposed designated projects and related activities taking 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 and the associated activities of the Project;
  - (ii) the conditions and requirements for the detailed design, construction, operation, restoration and aftercare stages 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 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 provide information on the consideration of alternatives to avoid and minimize the potential environmental impacts to the ecological sensitive areas and other sensitive uses; to compare the environmental benefits and dis-benefits of each of the different options; to provide reasons for selecting the preferred option(s) and to describe the part of environmental factors played in the selection;
  - (iv) to identify and quantify emission sources and determine the significance of impacts on sensitive receivers and potential affected uses;
  - (v) to identify and quantify any potential landscape and visual impacts and to propose measures to mitigate these impacts;
  - (vi) to identify and quantify any potential losses or damage and other potential impacts to flora, fauna and natural habitats and to propose measures to mitigate these impacts;
  - (vii) to identify any negative impacts on site of cultural heritage and to propose measures to mitigate these impacts;
  - (viii) to propose the provision of mitigation measures so as to minimize pollution, environmental disturbance and nuisance during construction, operation, restoration and aftercare stages of the Project;
  - (ix) to investigate the feasibility, practicability, effectiveness and implications of the proposed mitigation measures;
  - (x) to identify, predict and evaluate the residual environmental impacts (i.e. after practicable mitigation) and the cumulative effects expected to arise during the construction, operation, restoration and aftercare stages of the Project in relation to the sensitive receivers and potential affected uses;
  - (xi) to identify, assess and specify methods, measures and standards, to be included in the detailed design, construction, operation, restoration and aftercare stages of the Project which are necessary to mitigate these environmental impacts and cumulative effects and reduce them to acceptable levels;
  - (xii) 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; and
  - (xiii) to design and specify environmental monitoring and audit requirements to ensure the effective implementation of the recommended environmental protection and pollution control measures.

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

#### **3.1 The Purpose**

The purpose of this study brief is to scope the key issues of the EIA study. 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 EIAO (hereinafter referred to as "the TM") are fully complied with.

### 3.2 The Scope

The scope of this EIA study covers the Project mentioned in sub-section 1.2 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) the potential noise impact to the noise sensitive receivers during the construction, operation, restoration and aftercare of the Project including the off-site traffic noise impact along the Wo Keng Shan Road;
- (ii) the potential air quality impacts to the air sensitive receivers during the construction, operation, restoration and aftercare of the Project including the off-site dust and odour impact along the Wo Keng Shan Road;
- (iii) the potential impacts of various types of wastes to be generated from the construction, operation, restoration and aftercare stages of the Project, in particular the excavated materials arising from site formation works;
- (iv) the potential water quality impact caused by site formation, drainage diversion and any other works activities during construction, in particular the potential impact to the nearby natural watercourse especially the Lin Ma Hang Stream and its associated water system in the catchment area;
- (v) the potential water quality impact caused by the operation, restoration and aftercare stages of the Project, in particular the potential impact to the nearby natural watercourse, especially the Lin Ma Hang Stream and its associated water system in the catchment area;
- (vi) the potential landfill gas hazard associated with the construction, operation, restoration and aftercare of the Project;
- (vii) the potential landscape and visual impacts caused by the Project during construction, operation, restoration and aftercare stages, in particular the potential impact to the landscape value of Robin's Nest;
- (viii) the potential cultural heritage impacts caused by the Project, in particular the potential impact to the Tong To Shan Settlement District;
- (ix) the potential aquatic and terrestrial ecological impacts arising from the construction, operation, restoration and aftercare stages of the Project, including the loss of habitats, removal of vegetation and disturbance to wildlife;
- (x) the environmental risk to the Lin Ma Hang Stream and the Sham Chun River due to accidental leakage of leachate and/or other wastewater during construction, operation, restoration and aftercare stages of the Project and the necessary contingency measures;
- (xi) the potential impact to the ecological sensitive areas, including the following and any other sensitive areas that may be identified during the course of the EIA study:
  - (a) the Lin Ma Hang Stream;
  - (b) the Lin Ma Hang Lead Mines Site of Special Scientific Interest (SSSI);
  - (c) the potential country park at Robin's Nest;
  - (d) the water table of Lin Ma Hang Stream catchment and Wong Mau Hang

Shan which the tributaries of the Lin Ma Hang Stream are located.

- (xii) The potential cumulative environmental impacts of the Project, through interaction or in combination with other existing, committed and planned developments in the vicinity of the Project, and that those impacts may have a bearing on the environmental acceptability of the Project. Consideration shall be given to account for the likely concurrent projects including the existing NENT Landfill.

### **3.3 Consideration of Alternative Options**

#### **3.3.1 The Need of the Project**

The Applicant shall study and review the need of the Project as outlined in sub-section 1.2 above, and provide information/proof to justify the need. The Applicant shall explain clearly the purpose and objectives of the Project and describe the scenarios with and without the Project.

#### **3.3.2 Consideration of Different Extension Areas**

In addition to the proposed extension area mentioned in sub-section 1.2 above, the Applicant shall consider other feasible extension areas for the Project. A comparison of the environmental benefits and dis-benefits of possible extension areas shall be made with a view to recommending the preferred extension area to avoid adverse environmental impact to the maximum practicable extent. In particular, consideration shall be given to avoid or minimize the disturbance to the ecosystems in the adjacent areas including the Lin Ma Hang Stream, Robin's Nest and the "Green Belt" zone area.

#### **3.3.3 Consideration of Alternative Construction Methods and Sequences of Works**

Having regard to the cumulative effects of the construction period and the severity of the construction impacts to the affected sensitive receivers, the EIA study shall explore alternative construction methods and sequences of works for the Project, with a view to avoiding prolonged adverse environmental impacts to the maximum practicable extent. A comparison of the environmental benefits and dis-benefits of applying different construction methods and sequence of works shall be made.

#### **3.3.4 Selection of Preferred Scenario**

Taking into consideration the findings resulting from sub-sections 3.3.2 and 3.3.3 above, the Applicant shall recommend/justify the selection of the preferred scenario that will avoid or minimize adverse environmental effects arising from the Project, and adequately describe the part that environmental factors played in arriving at the final selection.

### **3.4 Technical Requirements**

The Applicant shall conduct the EIA study to address all environmental aspects as described in sub-sections 3.1, 3.2 and 3.3 above. The EIA study shall include the following technical requirements on specific impacts:

#### **3.4.1 Air Quality Impact**

3.4.1.1 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.

3.4.1.2 The study area for air quality impact assessment shall generally be defined by a distance of 500 metres from the boundary of the project site; with consideration be given to extend the area to include major emission sources that may have a bearing on the environmental acceptability of the Project. It will have to include areas where the air quality may be potentially affected by

the Project especially areas close to the road network affected by traffic generated from this Project. In particular, the areas along both sides of the Wo Keng Shan Road. Such assessment shall be based on the best available information at the time of the assessment. The emissions from associated works of the Project shall also be included in determining the cumulative impacts. Besides, if the likely concurrent projects as mentioned in sub-section 3.2 (xii) above and any other concurrent projects are identified relevant during the course of the EIA study, its possible emissions shall also be taken into account in the air quality impact assessment.

3.4.1.3 The Applicant shall assess the construction dust impact arising from the land based works of the Project and the air quality impact (including dust, odour, vehicle emissions, toxic and odorous components of landfill gas, flaring emissions and other air pollutants) during operation, restoration and aftercare stages of the Project with reference to the relevant sections of the guidelines in Appendices B-1 to B-3, or other methodology as agreed by the Director.

3.4.1.4 The air quality impact assessment shall include the following:

(i) Background and Analysis of Activities

(a) Provide 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 both construction, operation, restoration and aftercare stages.

(b) Give 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. That is, the Applicant shall consider alternative construction methods/phasing programmes and alternative operation modes to minimize the air quality impact during construction, operation, restoration and aftercare stages of the Project.

(c) Present the background air quality levels in the assessment area for the purpose of evaluating the cumulative air quality impacts during construction, operation, restoration and aftercare stages of the Project.

(ii) Identification of Air Sensitive Receivers (ASRs) and Examination of Emission/Dispersion Characteristics

(a) Identify and describe representative existing and planned/committed ASRs that would likely be affected by all identified potential adverse environmental impacts arising from the Project, both on-site and off-site, including those earmarked on the relevant Outline Zoning Plans, Development Permission Area Plans, Outline Development Plans, Layout Plans and other relevant published land use plans. The Applicant shall select assessment points of the identified ASRs that represent the worst impact point of these ASRs. A map clearly showing the locations and descriptions such as names of buildings, uses and heights of the selected assessment points shall be given. The separation distances of these ASRs from the nearest emission sources shall also be given.

(b) Provide an exhaustive list of air pollutant emission sources, including any nearby emission sources which are likely to have impact related to the Project based on the analysis of the activities during construction, operation, restoration and aftercare stages of the Project in sub-section 3.4.1.4(i)(a) above. Confirmation regarding the validity of the assumptions adopted and the magnitude of the activities (e.g. volume of construction material handled, traffic mix and volume on a road etc.)

shall be obtained from the relevant government departments/authorities and documented.

(iii) Construction Phase Air Quality Impact

(a) 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. A monitoring and audit programme for the construction phase shall be devised to verify the effectiveness of the control measures proposed so as to ensure proper construction dust control.

(b) If the Applicant anticipates that the Project will give rise to significant construction dust impacts likely to exceed the recommended limits in the TM at the ASRs despite the incorporation of the dust control measures proposed in accordance with sub-section 3.4.1.4(iii)(a) above, 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 sub-section 3.4.1.4(v) below when carrying out the quantitative assessment.

(iv) Operational Phase Air Quality Impact

(a) The Applicant shall calculate the expected air pollutant concentrations at the identified ASRs 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 sub-section 3.4.1.4(ii)(b) above. The Applicant shall follow sub-section 3.4.1.4(v) below when carrying out the quantitative assessment.

(v) Quantitative Assessment Methodology

(a) The Applicant shall apply the general principles enunciated in the modelling guidelines in Appendices B1 to B3 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. Detailed calculations of air pollutants emission rates for input to the modelling 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.

(b) The Applicant shall identify the key/representative air pollutant parameters (types of pollutants and the averaging time concentrations) to be evaluated and provide explanation for selecting such parameters for assessing the impact from the Project.

(c) The Applicant shall calculate the overall cumulative air quality impact at the ASRs identified under sub-section 3.4.1.4 (ii) 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.

(d) If there is any direct technical noise remedy recommended in the study, its air quality implication shall be assessed. For instance, if barriers that may affect dispersion of air pollutants are proposed, then the implications of such remedies on air quality impact shall be assessed. If tunnel or noise enclosures are proposed, then portal emissions of the tunnel/enclosed road sections and air quality inside the tunnel/enclosed road sections shall also be addressed. The Applicant shall highlight clearly the locations and types of agreed noise mitigating measures (where applicable), be they barriers, tunnel/road enclosure and their portals, and affected ASRs, on the contour maps for easy reference.

(vi) Mitigation Measures for Non-compliance

The Applicant shall propose remedies and mitigating measures where the predicted air quality impact exceeds the criteria set in section 1 of Annex 4 in the TM. These measures and other associated constraints on future land use planning shall be agreed with the relevant government departments/authorities and be clearly documented in the EIA report. The Applicant shall demonstrate quantitatively that the residual impacts after incorporation of the proposed mitigating measures will comply with the criteria stipulated in section 1 of Annex 4 in the TM.

(vii) Submission of Model Files

All input and output file(s) of the model run(s) shall be submitted to the Director in electronic format.

### 3.4.2 Noise Impact

3.4.2.1 The Applicant shall follow the criteria and guidelines for evaluating and assessing the noise impacts arising from construction, operation, restoration and aftercare stages of the Project as stated in Annexes 5 and 13 of the TM, respectively.

3.4.2.2 The noise impact assessment shall include the following :

(i) Determination of Assessment Area

The study area for the noise impact assessment shall generally be defined by a distance of 300m from the boundary of the project site; with consideration be given to extend the area to include major emission sources that may have a bearing on the environmental acceptability of the Project. It will have to include areas where the noise sensitive uses may be potentially affected by the Project especially areas close to the road network affected by traffic generated from this Project. In particular, the areas along both sides of the Wo Keng Shan Road. Subject to the agreement of the Director, the assessment area could be reduced accordingly if the first layer of noise sensitive receivers (NSRs), closer than 300m from the outer project limit, provides acoustic shielding to those receivers at further distance behind. Similarly, subject to the agreement of the Director, the assessment area shall be expanded to include NSRs at distance >300m which would be affected by the construction, operation, restoration and aftercare stages of the Project.

(ii) Provision of Background Information and Existing Noise Levels

(a) The Applicant shall provide all background information relevant to the



Project, including relevant previous or current studies. Unless required for determining the planning standards, such as those for planning of fixed noise sources, no existing noise levels are required except as set out below.

(iii) Identification of Noise Sensitive Receivers

(a) The Applicant shall refer to Annex 13 of the TM when identifying the NSRs. The NSRs shall include all existing NSRs and all planned/committed noise sensitive developments and uses earmarked on the relevant Outline Zoning Plans, Development Permission Area Plans, Outline Development Plans, Layout Plans and other relevant published land use plans. Photographs of all existing NSRs shall be appended to the EIA report.

(b) The Applicant shall select assessment points to represent all identified NSRs for carrying out quantitative noise assessment described below. The assessment points shall be agreed with the Director prior to the quantitative noise assessment. A map showing the location and description such as name of building, use, and floors of each and every selected assessment point shall be given. For planned noise sensitive land uses without committed site layouts, the Applicant should use the relevant planning parameters to work out representative site layouts for operational noise assessment purpose.

(iv) Provision of an Emission Inventory of the Noise Sources

The Applicant shall provide an inventory of noise sources including representative construction equipment for construction noise assessment, and traffic flow/fixed plant equipment, as appropriate, for operational noise assessment. Confirmation on the validity of the inventory shall be obtained from the relevant government departments/authorities and documented.

(v) Construction Noise Assessment

(a) The assessment shall cover the cumulative noise impacts due to the construction works of the Project and other likely concurrent projects as mentioned in sub-section 3.2 (xii) above and any other relevant concurrent projects identified during the course of the EIA study.

(b) The Applicant shall carry out assessment of noise impact from construction (excluding percussive piling) of the Project during day time, i.e. 7 a.m. to 7 p.m., on weekdays other than general holidays in accordance with the methodology stipulated in paragraphs 5.3. and 5.4 of Annex 13 of the TM. The criteria in Table 1B of Annex 5 of the TM shall be adopted in the assessment.

(c) To minimize the construction noise impact, alternative construction methods to replace percussive piling shall be proposed as far as practicable. In case blasting works will be involved, it should be carried out, as far as practicable, outside the sensitive hours of 7 p.m. to 7 a.m. on Monday to Saturday and any time on a general holiday, including Sunday. For blasting that must be carried out during the above-mentioned sensitive hours, the noise impact in associated with the removal of debris and rocks should be fully assessed and adequate mitigation measures should be recommended to reduce the noise impact as appropriate.

(d) If the unmitigated construction noise levels are found exceeding the

relevant criteria, the Applicant shall propose practicable direct mitigation measures (including movable barriers, enclosures, quieter alternative methods, re-scheduling and restricting hours of operation of noisy task) to minimize the impact. If the mitigated noise levels still exceed the relevant criteria, the duration of the noise exceedance shall be given.

(e) The Applicant shall formulate a reasonable construction programme as far as practicable such that no work will be required in the 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 the relevant technical memoranda issued under the NCO. Regardless of the results of the construction noise impact assessment for restricted hours, the Noise Control Authority will process the 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 the EIA report.

(vi) Operational Noise Assessment

(a) Road Traffic Noise

(a1) Calculation of Noise Levels

The Applicant shall calculate the expected road traffic noise from Wo Keng Shan Road using methods described in the U.K. Department of Transport's "Calculation of Road Traffic Noise" (1988). Calculations of future road traffic noise shall be based on the peak hour traffic flow in respect of the maximum traffic projection during the expected life of the Project. The Applicant shall calculate traffic noise levels at NSRs along Wo Keng Shan Road. The EIA shall contain sample calculations and input parameters for 10 assessment points as requested by the Director. The Applicant shall prepare and provide drawings (i.e. road-plots of the traffic noise model) of appropriate scale to show the road segments, topographic barriers, and assessment points of sensitive receivers input into the traffic noise model.

The Applicant shall provide input data sets of traffic noise prediction model adopted in the EIA study as requested by the Director for the following scenarios:

- (1) unmitigated scenario at assessment year;
- (2) mitigated scenario at assessment year.

The data shall be in electronic text file (ASCII format) containing road segments, barriers and noise sensitive receivers information. The data structure of the above file shall be agreed with the Director. CD-ROM(s) containing the above data shall be attached in the EIA report.

(a2) Presentation of Noise Levels

The Applicant shall present the prevailing and future noise levels in  $L_{10}$  (1 hour) at the NSRs on tables and plans of suitable scale.

A quantitative assessment at the NSRs along Wo Keng Shan Road shall be carried out and compared against the criteria set out in Table 1A of Annex 5 of the TM. The potential noise impact along Wo Keng Shan

Road shall be quantified by estimating the total number of dwellings, classrooms and other noise sensitive elements that will be exposed to noise levels exceeding the criteria set in Table 1A of Annex 5 in the Technical Memorandum.

(a3)Proposals for Noise Mitigation Measures

After rounding of the predicted noise levels according to the U.K. Department of Transport's "Calculation of Road Traffic Noise" (1988), the Applicant shall propose direct technical remedies in all situations where the predicted traffic noise level exceeds the criteria set in Table 1A of Annex 5 in the TM by 1 dB(A) or more. Specific reasons for not adopting certain direct technical remedies in the design to reduce the traffic 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 quantified and laid down. The total number of dwellings, classrooms and other noise sensitive element that will be benefited by the provision of direct technical remedies should be provided. In order to clearly present the extents/locations of the recommended noise mitigation measures, plans prepared from 1:1,000 or 1:2,000 survey maps showing the mitigation measures (e.g. enclosures/barriers, low noise road surfacing, etc.) shall be included in the EIA report.

The total number of dwellings, classrooms and other noise sensitive elements that will still be exposed to noise above the criteria with the implementation of all recommended direct technical remedies shall be quantified. The Applicant shall provide in the EIA report the information of the recommended noise mitigation measures (such as barrier types, nominal dimensions at different cross-sections, extents/locations, lengths, mPD levels of barriers) in electronic format as agreed by the Director.

(b)Fixed Noise Sources

(b1)Assessment of Fixed Source Noise Levels

The Applicant shall calculate the expected noise using standard acoustics principles. Calculations for the expected noise shall be based on assumed plant inventories and utilization schedule for the worst case scenario. The Applicant shall calculate the noise levels taking into account correction of tonality, impulsiveness and intermittency in accordance with the Technical Memorandum for the Assessment of Noise from Places other than Domestic Premises, Public Places or Construction Sites.

(b2)Presentation of Noise Levels

The Applicant shall present the existing and future noise levels in  $L_{eq}$  (30 min) at the NSRs at various representative floor levels (in m P.D.) on tables and plans of suitable scale.

A quantitative assessment at the NSRs for the proposed fixed noise source (s) shall be carried out and compared against the criteria set out in Table 1A of Annex 5 of the TM.

(b3)Proposals for Noise Mitigation Measures

The Applicant shall propose direct technical remedies within the project limits in all situations where the predicted noise level exceeds the criteria set out in Table 1A of Annex 5 of the TM to protect the affected NSRs.

(vii) Assessment of Side Effects and Constraints

The Applicant shall identify, assess and propose means to minimize any side effects and to resolve any potential constraints due to the inclusion of any recommended direct technical remedies.

(viii) Evaluation of Constraints on Planned Noise Sensitive Developments/Landuses

For planned noise sensitive uses which will still be affected even with all practicable direct technical remedies in place, the Applicant shall propose, evaluate and confirm the practicality of additional measures within the planned noise sensitive uses and shall make recommendations on how these noise sensitive uses will be designed for the information of relevant parties.

The Applicant shall take into account agreed environmental requirements / constraints identified by the study to assess the development potential of concerned sites which shall be made known to the relevant parties.

### 3.4.3 Water Quality Impact

3.4.3.1 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.

3.4.3.2 The assessment area for the water quality impact assessment shall include all areas within 500m from the Project boundary of the Project Site. This study area could be extended to include other areas such as nearby watercourses and the associated water systems, including the coastal water of Deep Bay and Starling Inlet, if they are found also being impacted during the course of the EIA Study and have a bearing on the environmental acceptability of the Project. The EIA Study shall assess the water quality impacts due to the Project.

3.4.3.3 The Applicant shall identify and analyse all physical, chemical and biological disruptions of marine, fresh water or ground water system(s), catchment area(s), storm water pipeline and coastal water arising from the construction, operation, restoration and aftercare stages of the Project. The Applicant shall assess the environmental risk to the water bodies (including Lin Ma Hang Stream and Sham Shun River) due to accidental leakage of leachate and/or other wastewater and to devise any necessary contingency measures.

3.4.3.4 The Applicant shall predict, quantify and assess any water quality impacts arising from the Project on the water system(s) and the sensitive receivers by appropriate techniques proposed by the Applicant and agreed with the Director. Possible water quality impacts due to construction, operation, restoration and aftercare of the Project shall include but not be limited to changes in hydrology, flow regime, sediment erosion and deposition pattern, surface, ground and storm water quality, sediment quality and effects on the flora and fauna due to such changes in the study area. The prediction shall include possible different construction stages or sequences, and different operation, restoration and aftercare stages. Affected sensitive receivers shall be identified by the assessment tool with indications of degree of severity.

3.4.3.5 The Applicant shall take into account and include likely different construction, operation, restoration and aftercare stages or sequences of the Project in the assessment. The assessment shall have regard to the frequency,

duration, volume and flow rate of the discharges and its pollutant and sediment loading. Reference shall be made to available information in previous studies including the Study on Sustainable Development for the 21<sup>st</sup> Century (SUSDEV); Biodiversity Survey conducted by the University of Hong Kong; Conservation Recommendations for Fish Communities of Lowland Streams in Hong Kong prepared by Dr. Chan Pui Lok, Bosco and Prof. Davis Dudgeon; and the on-going EIA Study of the Drainage Improvement in Northern New Territories – Package C. Essentially the assessment shall address the following:

- (i) Collection and review of background information on the existing and planned water system(s) and their respective catchments and sensitive receivers which might be affected by the Project during construction, operation, restoration and aftercare stages.
- (ii) Characterization of water and sediment quality of the water system(s) and respective catchments and sensitive receivers which might be affected by the Project during construction and operation based on existing information or appropriate site survey and tests.
- (iii) Identification and analysis of all existing and planned future activities and beneficial uses related to the water system(s) and identification of all water sensitive receivers, including those highlighted in sub-section 3.2 above. The Applicant shall refer to, *inter alia*, those developments and uses earmarked on the relevant Outline Zoning Plans, Development Permission Area Plans, Outline Development Plans, Layout Plans and other relevant published land use plans.
- (iv) Identification of pertinent water and sediment quality objectives and establishment of other appropriate water and sediment quality criteria or standards for the water system(s) and all the sensitive receivers in sub-section 3.4.3.5(i) above and particularly those ecologically sensitive receivers for the assessments in sub-section 3.4.8.
- (v) Review of the construction sequences and methods, operation, restoration and aftercare of the Project to identify any alteration of existing water courses, natural streams/ponds, shoreline or bathymetry, flow regimes, ground water levels and catchment types or areas;
- (vi) Identification, analysis and quantification of all existing, likely future water quality and sediment pollution sources, including point discharges and non-point sources to surface water runoff and analyse these in relation to the provision and adequacy of future facilities to reduce such pollution in terms of capacity and levels of treatment. Details of the leachate collection and treatment system shall be provided and the capacity of the sewerage infrastructure system shall be addressed.
- (vii) Evaluation and quantification of the surface and sub-surface flows and pollution loads collected and discharged into the existing and planned downstream water courses and drainage systems during the restoration and aftercare stages of the Project.
- (viii) Establishment and provision of a pollution load inventory on the quantities and characteristics of all existing and likely future water pollution sources identified above. Field investigation and laboratory tests shall be conducted as appropriate to fill in any major information gaps.

- (ix) Assessment of the cumulative impacts due to other related concurrent and planned projects, activities or pollution sources along the identified water system(s) and sensitive receivers that may have a bearing on the environmental acceptability of the Project. This shall include the potential cumulative construction and operational water quality impact arising from, *inter alia*, the associated works of the Project, the activities and planned projects highlighted in sub-section 3.2 (xii) above;
- (x) Assessment and evaluation of any potential water quality impacts on the identified water system(s), respective catchments and sensitive receivers due to sewage arising from the construction and operation of the Project. Any effluent generated will require appropriate collection, treatment and disposal to within standards and objectives and criteria established in (iv) above.
- (xi) Assessment and evaluation of any potential storm water and construction runoff impacts on the water system(s), respective catchments and sensitive receivers, particularly the Lin Ma Hang Stream, Sham Chun River and Inner Deep Bay, during the construction, operation, restoration and aftercare stages of the Project so as to reduce the water and sediment quality impacts to within standards, objectives and criteria established in (iv) above. This assessment shall have regard for the frequency, duration, volume and flow rate of the discharge and its pollutant and sediment loads. Best management practices shall be recommended to reduce any potential impacts arising from site and storm water runoff.
- (xii) Establishment of the erosion control plan during the construction, operation, restoration and aftercare stages as per assessment carried out in point (xi) above. This erosion control plan shall incorporate details such as locations, sizes and types of best management practices, which will be used to reduce storm water pollution arising from the Project
- (xiii) The Applicant shall devise mitigation measures to avoid or minimize the impacts identified above. The residual impacts on the water system(s) and the sensitive receivers with regard to the relevant water and sediment quality objectives, criteria, standards or guidelines shall be assessed and quantified.
- (xiv) With reference to the assessment findings in sub-section 3.4.3.4 above, review any relevant existing contingency plan(s) and if necessary, propose modification(s) to the existing contingency plan (s), or derive new contingency plan(s) as appropriate to deal with accidental leakage of leachate. The plan(s) shall aim to contain and/or remove the accidental leakage of leachate so as to prevent and/or minimize exposure to contaminants by environmentally sensitive receivers/areas such as Lin Man Hang Stream.

#### 3.4.4 Waste Management Implications

3.4.4.1 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.

3.4.4.2 The assessment of waste management implications shall cover the following:

(i) Analysis of Activities and Waste Generation

The Applicant shall identify the quantity, quality and timing of the waste arising as a result of the construction, operation, restoration and aftercare activities of the Project, based on the sequence and duration of these activities.

(ii) Proposal for Waste Management

- (a) 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 the planning and design stages e.g. by modifying the design approach and in the construction stage for maximizing waste reduction shall be separately considered.
- (b) After considering all 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 options for each type of waste shall be described in detail. Pretreatment processes for slurry before disposal shall be addressed in details. The disposal method recommended for each type of waste shall take into account of the result of the assessment in (c) below.
- (c) The impact caused by handling (including labelling, packaging & storage), collection, and reuse/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; and
  - public transport.

### 3.4.5 Landfill Gas Hazards

3.4.5.1 The landfill gas hazards assessment shall entail two main components which are qualitative risk assessment and landfill gas precautionary/ protection design. Specifically, the assessment shall include the following technical tasks:

- (i) review of background information (including landfill gas monitoring data) and studies related to the NENT Landfill and the proposed NENT Landfill Extension;
- (ii) identification of the nature and extent of the sources, including the likely concentrations and/or amounts of hazardous emissions which might have the potential for impacts on the Project and impacts from the Project to the potential receivers;
- (iii) identification of the possible pathways through the ground, underground cavities, utilities or ground water, and the nature of these pathways through which the hazardous emissions must traverse if they were to reach the Project and the new consultation zone;
- (iv) identification of the potential receivers associated with the Project which are sensitive to the impacts of the hazardous emissions;
- (v) qualitative assessment on the degree of risk which the hazardous emissions may impose on the receivers for each of the source-pathway-receiver combinations; and

- (vi) design of suitable level of precautionary measures and contingency plan for the Project and the potential receivers, if needed.

### 3.4.6 Landscape and Visual Impact

3.4.6.1 The Applicant shall follow the criteria and guidelines as stated in Annexes 10 and 18 of the TM for evaluating and assessing landscape and visual impacts of any above ground structures and work areas associate with the Project. Landscape and visual impacts during both construction, operation restoration and aftercare stages within the study area shall be assessed.

3.4.6.2 The study area for the landscape impact assessment shall include all areas within 500 metres from the Project. The study area for the visual impact assessment shall be defined by the visual envelope from the Project. The defined visual envelop must be shown on a plan.

3.4.6.3 The Applicant shall review relevant Outline Zoning Plans, Development Permissions Area Plans, Outline Development Plans, Layout Plans, other relevant published land use plans, planning briefs and studies which may identify areas of high landscape value and recommend country park, coastal protection area, conservation area, open space, amenity area and green belt designations. Any guidelines on landscape strategies, landscape frameworks, urban design concepts, building height profiles, special design areas, landmarks, designated view corridors, open space networks, landscape links 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 so as to assess whether the project can fit into surrounding setting. Any conflict with statutory town plan(s) and any published land use plans should be highlighted and appropriate follow-up action should be recommended.

3.4.6.4 The Applicant shall describe, appraise, analyse and evaluate the existing and planned landscape resources and character of the study area. A system shall be derived for judging landscape and visual impact significance as required under the TM. Annotated oblique aerial photographs and plans of suitable scale showing the baseline landscape character areas and landscape resources 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 of the landscape framework and its ability to accommodate change. The Applicant shall identify the degree of compatibility of the Project with the existing and planned landscape settings. The landscape impact assessment shall quantify the potential landscape impacts as far as possible, so as to illustrate the significance of such impacts arising from the Project. Clear mapping of the landscape impact is required. A tree survey shall be carried out and the impacts on existing mature trees shall be addressed. Cumulative landscape and visual impacts of the Project with other committed and planned developments and other possible developments in the study area shall be assessed.

3.4.6.5 The Applicant shall assess the visual impacts of the Project. Clear illustrations including mapping of visual impact is required. The assessment shall include the following:

- (i) identification and plotting of visual envelop of the Project;
- (ii) identification of the key groups of sensitive receivers within the visual envelope with regard to views from both ground level, sea level and elevated vantage points;



- (iii) description of the visual compatibility of the Project with the surrounding and the planned setting, and its obstruction and interference with the key views of the adjacent areas;
- (iv) description of the severity of visual impacts in terms of nature, distance and number of sensitive receivers. 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.

3.4.6.6 The Applicant shall evaluate the merits of preservation in totality, in parts or total destruction of existing landscape and the establishment of a new landscape character area. In addition, alternative alignment, design and construction methods that would avoid or reduce the identified landscape and visual impacts shall 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 include consideration of potential enhancement of existing landscape and visual quality. The Applicant shall recommend mitigation measures to minimize the adverse effects identified above, including provision of a landscape design.

3.4.6.7 The mitigation measures shall include preservation of vegetation, transplanting of mature trees, provision of screen planting, re-vegetation of disturbed land, woodland restoration, compensatory planting, provisioning/ reprovisioning of amenity areas and open spaces, minimization of noise barriers, design of structures, provision of finishes to structures, colour scheme and texture of material used and any measures to mitigate the impact on existing and planned land uses. Parties shall be identified for the on going management and maintenance of the proposed mitigation works to ensure their effectiveness throughout the operation, restoration and aftercare phases of the Project. A practical programme and funding proposal for the implementation of the recommended measures shall be provided. For noise barriers, if any, presentation of photomontages of the Project in the existing rural setting and planned setting illustrating the effectiveness of the proposed mitigation measures shall be included.

3.4.6.8 Annotated illustration materials such as coloured perspective drawings, plans and section/elevation diagrams, oblique aerial photographs, photographs taken at vantage points, and computer-generated photomontage shall be adopted to fully illustrate the landscape and visual impacts of the Project to the satisfaction of the Director. In particular, the landscape and visual impacts of the Project with and without mitigation measures shall also be properly illustrated in existing and planned setting by computer-generated photomontage so as to demonstrate the effectiveness of the proposed mitigation measures. All computer graphics shall be compatible with Microstation DGN file format. The Applicant shall record the technical details such as system set-up, software, data files and function in preparing the illustration, which may need to be submitted for verification of the accuracy of the illustrations.

#### **3.4.7 Impact on Cultural Heritage**

3.4.7.1 The Applicant shall follow the criteria and guidelines for evaluating and assessing the cultural heritage impacts as stated in Annexes 10 and 19 of the TM, respectively.

3.4.7.2 The cultural heritage impact assessment shall include terrestrial investigation as well as built heritage investigation. The Applicant shall refer to Appendix C

for the detailed requirements.

**(i) Terrestrial Archaeological Investigation**

The study areas for terrestrial archaeological investigation shall include areas within 50 metres from the recommended extension area of the Project and works areas that may have adverse impacts on known and unknown archaeological sites. Special attention shall be paid to the Tong To Shan Settlement District. The Applicant shall engage a qualified archaeologist who shall obtain a License from the Antiquities Authority before undertaking the field evaluation under the provision of the Antiquities and Monuments Ordinance (Cap. 53).

**(ii) Built Heritage Investigation**

The Applicant shall identify all sites of historic buildings and structures based on the result of desktop research and field evaluation, and establish a comprehensive inventory of these sites that might have the potential to be affected by the Project. Historic buildings and structures include a variety of forms with a wide range of different functions like domestic, working and cultural uses, places of worship, houses, agricultural buildings, boundary stones and walls, workshops etc. The investigation shall be undertaken by an expert in cultural heritage.

(iii) In the event that the investigations as stated in sub-sections 3.4.7.2 (i) and (ii) prove to be inadequate, the Applicant shall undertake supplementary studies as agreed by the Director. The Applicant can make necessary reference to Appendix C on the "*Criteria for Culture Heritage Impact Assessment*".

3.4.7.3 The Applicant shall demonstrate that the disturbance, including access, to those sites of cultural heritage are avoided to the maximum practicable extent by modification of the site area, configuration, layout and design of the Project. For those sites of cultural heritage that might still be directly and indirectly affected by the Project, the Applicant shall recommend practicable mitigation measures and monitoring to avoid or keep the adverse impacts on the site of cultural heritage to the minimum. A checklist including all the affected sites of cultural heritage, impacts identified, recommended mitigation measures as well as the implementation agent and period shall also be included in the EIA report.

**3.4.8 Ecological Impact (Both 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 study area for the purpose of terrestrial ecological assessment shall include all areas within 500 metres from the site boundary of the land based works areas or the area likely to be impacted by the Project. For aquatic ecology, the study area shall be the same as the water quality impact assessment or the area likely to be impacted by the Project.

3.4.8.3 In the ecological impact assessment, the Applicant shall examine the flora, fauna and other components of the ecological habitats within the assessment area, including those highlighted in sub-section 3.2 above. The aim shall be to protect, maintain or rehabilitate the natural environment. In particular, the Project shall avoid 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 arising from the

construction and operation of the Project and in combination with those cumulative impacts from associated works of the Project, both directly by physical disturbance and indirectly by changes of water quality, sedimentation patterns and hydrodynamic regime.

3.4.8.4 The assessment shall include the following major tasks:

- (i) review and incorporate the findings of relevant studies including the Study on Sustainable Development for the 21<sup>st</sup> Century (SUSDEV); Biodiversity Survey conducted by the University of Hong Kong; Conservation Recommendations for Fish Communities of Lowland Streams in Hong Kong prepared by Dr. Chan Pui Lok, Bosco and Prof. Davis Dudgeon; and in particular the on-going EIA Study of the Drainage Improvement in Northern New Territories – Package C (12 months ecology survey covering a full-year seasonal variation conducted in 2003/2004), and collate all the available information regarding the ecological characters of the assessment area;
- (ii) carry out necessary field surveys as determined under sub-section 3.4.8.4 (i) above, the duration of which shall be at least 6 months (covering wet season), and investigation to verify the information collected, fill the information gaps identified and fulfil the objectives of the EIA study;
- (iii) evaluate the information collected from sub-sections 3.4.8.4 (i) & (ii) above, and determine whether further ecological survey is required under the following sub-section 3.4.8.4 (v);
- (iv) present all relevant survey findings including previous surveys conducted in the Drainage Improvement in Northern New Territories – Package C and other relevant studies together with surveys carried out under this Study;
- (v) establish an ecological profile of the study area based on data of relevant previous studies/surveys and results of additional ecological field surveys, and describe the characteristics of each habitat found. Major information to be provided shall include:
  - (a) description of the physical environment, including all recognized sites of conservation importance and ecologically sensitive areas as listed in sub-section 3.2 above, and assess whether these sites will be affected by the Project or not;
  - (b) habitats maps of suitable scale (1:1000 to 1:5000) showing the types and locations of habitats in the study area;
  - (c) ecological characteristics of each habitat type such as size, vegetation type, species present, dominant species found, species diversity and abundance, community structure, seasonal patterns, inter-dependence of the habitats and species, and presence of any features of ecological importance;
  - (d) representative colour photographs of each habitat type and any important ecological features identified;
  - (e) species found that are rare, endangered and/or listed under local legislation, international conventions for conservation of wildlife/habitats or Red Data Books;
- (vi) investigate and describe the existing wildlife uses of the various habitats

with special attention to those wildlife groups and habitats with conservation interests, including but not limited to the following:

- woodlands
- wetlands
- natural stream courses and rivers (eg. Lin Ma Hang Stream)
- vertebrates (e.g. avifauna, mammals including bats, fish, herpetofauna)
- macroinvertebrates (e.g. butterflies, odonates, crustaceans)
- Lin Ma Hang Lead Mines SSSI
- Proposed Robin's Nest Country Park
- any other habitats and wildlife groups identified as having special conservation interests by this EIA study;

(vii) using suitable methodology to identify and quantify as far as possible any direct, indirect (e.g. changes in water qualities, hydrodynamics properties, sedimentation rates and patterns, hydrology), on-site, off-site, primary, secondary and cumulative ecological impacts on the wildlife groups and habitats mentioned in sub-section 3.4.8.4 (vi) above, such as destruction of habitats, reduction of species abundance/diversity, loss of feeding grounds, reduction of ecological carrying capacity, habitat fragmentation. Particular attention should be paid to the following:

- (a) impacts to hydrodynamic regime of the Lin Ma Hang Stream and its associated water system in the catchment area and aquatic life during the construction and operation stages;
- (b) impacts to the aquatic life due to the accidental leakage of leachate and/or other wastewater;
- (c) impact to the wildlife due to the accidental leakage of landfill gas;
- (d) impacts of habitat loss in the Robin's Nest and wildlife therein due to the Project;
- (e) impacts to the bats inhabiting in the nearby Lin Ma Hang Lead Mines because of loss of foraging ground due to the Project;
- (f) cumulative impacts due to other proposed development projects in the vicinity for example, the proposed drainage improvement work.

(viii) demonstrate that the ecological impacts due to the construction, operation, restoration and aftercare stages of the Project are avoided by design to the maximum practicable extent;

(ix) evaluate the significance and acceptability of the ecological impacts identified using well-defined criteria;

(x) recommend all possible alternative options (such as different extension area and/or using other construction methods and sequences) and practicable mitigation measures to avoid, minimize and/or compensate for the adverse ecological impacts identified, such as :

- (a) measures to recreate the natural habitats lost;
- (b) reinstatement of habitats temporarily affected by the Project to its original state and if possible with some enhancement features;
- (c) contingency plan for the accidental leakage of leachate and landfill gas

should be formulated to protect the water quality of the Lin Ma Hang Stream, aquatic life associated with the stream and other wildlife.

- (xi) evaluate the feasibility and effectiveness of the recommended mitigation measures and define the scope, type, location, implementation arrangement, subsequent management and maintenance of such measures;
- (xv) determine and quantify as far as possible the residual ecological impacts after implementation of the proposed mitigation measures;
- (xvi) evaluate the severity and acceptability of the residual ecological impacts using well-defined criteria; and
- (xvii) review the need for and recommend any ecological monitoring programme required.

#### 3.4.9 Summary of Environmental Outcomes

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

#### 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, operation, restoration and aftercare stages of the Project and, if affirmative, to define the scope of the 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. The Applicant shall also propose real-time reporting of monitoring data for the Project through a dedicated internet website.

3.4.10.3 The Applicant shall prepare a project implementation schedule (in the form of a checklist as shown in Appendix D to this EIA study brief) containing all the EIA study recommendations and mitigation measures with reference to the implementation programme.

### 4. DURATION OF VALIDITY

4.1 This EIA study brief is valid for 36 months after the date of issue. If the EIA study does not commence within this period, 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.

5.2 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 sub-section 5.2 (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.
- 5.3 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.
- 5.4 In addition, to facilitate the public inspection of the EIA report via the 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 in Portable Document Format (PDF version 4.0 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 the executive summary shall be included in the beginning of the document. Hyperlinks to all figures, drawings and tables in the EIA report and executive summary shall be provided in the main text from where the respective references are made. All graphics in the report shall be in interlaced GIF format unless otherwise agreed by the Director.
- 5.5 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.
- 5.6 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.
- 5.7 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.
- 5.8 To facilitate public involvement in the EIA process, the applicant shall produce 3-dimensional electronic visualisations of the major findings and elements of the EIA report, including baseline environmental information, the environmental situations with or without the project, key mitigated and unmitigated environmental impacts, and key recommended environmental mitigation measures so that the public can understand the project and the associated environmental issues. The visualisations shall be based on the EIA report and released to the public. The visualisations shall be submitted in CD-ROM or other suitable means agreed with the Director in commonly readable formats. Unless otherwise advised or agreed by the Director, copies of the CD-ROM shall be the same as the number of EIA reports required under Clause 5.2.

## 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-211/2004), 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.

--- END OF EIA STUDY BRIEF ---

May 2004  
Environmental Assessment and Noise Division,  
Environmental Protection Department

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[Appendix A](#) | [Appendix B1](#) | [Appendix B2](#) | [Appendix B3](#) | [Appendix C](#) | [Appendix D](#)

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