

11. ENVIRONMENTAL MONITORING AND AUDIT REQUIREMENTS

11.1. INTRODUCTION

- 11.1.1. This section summarizes the EM&A requirements for the Project during the construction and operation phases with reference to the assessment results of various environmental issues presented in this EIA Report.
- 11.1.2. The purpose of the EM&A programme is to ascertain and verify the assumptions implicit to, and accuracy of, EIA study predictions. The EM&A programme includes the scope of the EM&A requirements for the Project to ensure compliance with the EIA study recommendations, to assess the effectiveness of the recommended mitigation measures and to identify any further need for additional mitigation measures or remedial action.
- 11.1.3. Details of the EM&A requirements and the implementation schedule of mitigation measures are provided in a stand-alone EM&A Manual.

11.2. AIR QUALITY

Construction Phase

- 11.2.1. Dust suppression measures for construction dust are identified. These include restriction of heights from which materials are dropped and use of regular watering to reduce dust emissions stipulated under the *Air Pollution Control (Construction Dust) Regulation*. With the implementation of good site practices and sufficient dust suppression measures, air quality impacts are predicted to be insignificant and no residual impacts are anticipated during the construction phase.
- 11.2.2. As a result, no dust monitoring is considered to be required. Regular weekly site inspections are recommended to ensure proper implementation of the proposed mitigation measures. Details are presented in *Section 2* of the EM&A Manual.

Operation Phase

- 11.2.3. The potential air quality impacts with respect to operation of the Project are not expected. Therefore, EM&A is considered not necessary.

11.3. NOISE

Construction Phase

- 11.3.1. Noise monitoring is recommended as part of the EM&A programme for the construction phase of the Project to check compliance with the daytime construction noise criteria. Weekly site audit is also recommended to ensure the proper implementation of the

recommended mitigation measures for daytime construction activities as part of the EM&A programme. Details are presented in the EM&A Manual.

Operation Phase

- 11.3.2. Noise monitoring during operation phase is not necessary as no adverse fixed noise impact from the Project is anticipated with the implementation of the recommended mitigation measures and proper selection of the mitigation measures for the MVAC equipment and other fixed plants where necessary to meet the maximum allowable SWLs. Commissioning test should be conducted prior to operation of the Project to ensure that the fixed plant noise impact would comply with the relevant noise standards. No EM&A programme is required during the operation phase.

11.4. WATER QUALITY AND SEWERAGE

Construction Phase

- 11.4.1. With proper implementation of the recommended control measures, no adverse water quality impact is envisaged during the construction phase of the Project. Water quality monitoring is therefore not considered necessary. Nevertheless, weekly site inspection is proposed to be conducted during the construction phase in order to ensure the recommended control measures are properly implemented. Details are presented in the EM&A Manual.

Operation Phase

- 11.4.2. With full implementation of the proposed mitigation measures during the operation phase of the Project, no adverse water quality impact is predicted. Therefore, operation phase EM&A for water quality is not required.

11.5. WASTE MANAGEMENT IMPLICATION

Construction Phase

- 11.5.1. It will be the Contractor's responsibility to ensure that any waste produced during the construction activities are handled, stored, collected, transported and disposed of in accordance with recommended good waste management practices and relevant regulations and waste management guidelines. The recommended mitigation measures should form the basis of the site WMP to be developed by the Contractor as part of the Environmental Management Plan in accordance with *ETWB TC(W) No. 19/2005* and submitted to the Engineer for approval before the commencement of work in the construction phase. The EM&A requirement stated in the *ETWB TC(W) No. 19/2005* should be followed with regard to the management of C&D materials. Details are presented in the EM&A Manual.
- 11.5.2. It is recommended that the waste arisings generated during the construction activities should be audited monthly by the ET to determine if wastes are being managed in accordance with approved procedures. The audits should look at all aspects of on-site waste management practices including waste generation, storage, recycling, transport and disposal. Apart from site inspections, documents including licenses, permits, disposal and recycling records

should be reviewed and audited for compliance with the legislation of the recommended good site practice and other waste management mitigation measures.

Operation Phase

- 11.5.3. Adverse environmental impacts generated from handling, storage, collection, transportation and disposal of waste are not expected from the operation of the Project with the implementation of good waste management practices. Therefore, waste monitoring and audit programme for the operation phase of the Project would not be required.

11.6. CULTURAL HERITAGE

Construction Phase

Archaeological Impact Assessment

- 11.6.1. No adverse archaeological impact due to the proposed works of the Project is anticipated. As a precautionary measure, the Project Proponent is required to inform AMO immediately when any antiquities or supposed antiquities under the *Antiquities and Monuments Ordinance (Cap. 53)* are discovered during the course of works.

Built Heritage Impact Assessment

- 11.6.2. Condition survey should be carried out to record the conditions of heritage site before, during and upon completion of the Project. All the survey report should be submitted for AMO's record.
- 11.6.3. Cultural heritage monitoring is recommended during the foundation and excavation and lateral support works for the construction of new Annex Block. EM&A programme is proposed to be established to ensure the implementation of mitigation measures. Monitoring of vibration, ground settlement and tilting incorporated with the AAA system will be adopted during the foundation works and excavations for the UU diversion works, at the key CDEs within Project Site and Former Kowloon British School. Details are presented in the EM&A Manual.

Operation Phase

- 11.6.4. With the implementation of the proposed mitigation measures during the operation phase, no adverse cultural heritage impact is anticipated. Therefore, operation phase EM&A for cultural heritage is not required.

11.7. LANDSCAPE AND VISUAL

Construction Phase

- 11.7.1. The proposed landscape and visual mitigation measures should be incorporated in the landscape design and adopted throughout the construction period. Site inspections and audits should be undertaken during the construction phase of the Project to ensure the proposed

landscape and visual mitigation measures are properly implemented and maintained as per their intended objectives. Details are presented in *Section 7* of the EM&A Manual.

Operation Phase

- 11.7.2. Mitigation measures to be implemented during operation phase should be integrated into the detailed design and built as part of the construction works. Site inspections and audits are required during the operation phase (during the Contractor's establishment period) to ensure that the landscape and visual mitigation measures achieve the intended mitigation effects. A specialist landscape subcontractor should be employed for the implementation of tree and landscape works and subsequent maintenance operations during the establishment period.

11.8. SUMMARY OF EM&A REQUIREMENTS

- 11.8.1. All proposed mitigation measures in this EIA study shall be incorporated in EM&A programme for implementation. **Table 11.1** summarised the general EM&A requirements for each environmental parameter.

Table 11.1 Summary of EM&A requirements

Environmental Parameters	Construction Phase		Operation Phase	
	Monitoring	Audit	Monitoring	Audit
Air Quality	-	√	-	-
Noise	√	√	-	√
Water Quality	-	√	-	-
Waste Management	-	√	-	-
Cultural Heritage	√	√	-	-
Landscape and Visual	√	√	-	√*

**During the establishment period*

- 11.8.2. Details of the proposed mitigation measures, monitoring locations and procedures are presented in a stand-alone EM&A Manual.

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