

## 10 ENVIRONMENTAL MONITORING AND AUDIT

10.1 This section further elaborates the requirements of EM&A for the construction and operation of the Project, based on the assessment results of various environmental issues. The following sections summarise the recommended EM&A requirements. Details of the EM&A programme are presented in an EM&A Manual, which is part of the EIA report under this Project.

### Air Quality Impact

10.2 Construction of Peng Chau Sewage Treatment Works and demolition of the existing old structures, especially from excavation and material handling, would have elevated dust emissions on the nearest identified air sensitive receivers. The predicted dust level would exceed the hourly and daily criteria  $500\mu\text{g}/\text{m}^3$  and  $260\mu\text{g}/\text{m}^3$ , respectively.

10.3 Mitigation measures have been recommended. With the implementation of the proposed dust suppression measures such as watering and good site practice, the TSP levels at all ASRs would comply with the dust criteria.

10.4 Dust monitoring requirements are recommended in the EM&A Manual to ensure the efficacy of the control measures.

### Noise Impact

10.5 Elevated construction noise impacts from this Project alone are not anticipated at the identified NSR. However the Project construction is to be started at the same time as the construction of Peng Chau Helipad when most noisy equipment plants are scheduled to be operated, mitigation measures are required to reduce the cumulative noise impact to an acceptable level. Noise monitoring would have to be carried out to ensure that recommended mitigation measures be implemented effectively.

10.6 The construction activities of the Project would be carried out during daytime (between 0700 and 1900 hours). It is recommended to carry out noise measurements at the following period:

(a) Between 1900 and 2300 hours;

10.7 Noise measurement should be undertaken at the worst identified NSR for a 30 minute period during the daytime. Type 1 sound level meters, which comply with the International Electrochemical Commission (Publications 651:1979 and 804:1985), must be used for carrying out the noise measurement.

10.8 To establish the prevailing background noise level, one  $\text{Leq}$  (30 minutes) measurement, obtained between 0700 and 1900 hours of a normal weekdays, is required.

- 10.9 Baseline monitoring to establish the background noise environment will be required and should be carried out for at least 14 consecutive days prior to the commencement of the construction works. As the current programme of the Peng Chau Helipad project will be commenced 1 to 2 months before this Project and both projects are using the same noise monitoring location, it is therefore recommended to adopt the baseline monitoring results from the Helipad project without repeating the works unless a further delay is observed from the Helipad project. During the construction phase impact monitoring will be required in order to assess whether operations of PME on site are in compliance with construction noise criteria stipulated in TMEIAP.

### **Water Quality Impact**

- 10.10 Monitoring and auditing for marine water quality prior to, during construction and after the construction would be necessary. The monitoring and audit is to ensure that the released SS concentrations from the dredging activities would not adversely affect the sensitive receivers. This monitoring programme would be required to ensure the implementation of the recommended water quality mitigation measures and to assess the effectiveness of these measures during the construction works. If monitoring results indicate that the dredging activities have exceeded the predicted elevated SS concentrations even after the implementation of the recommended mitigation measures, the construction programme should be carefully reviewed to slow down production rates.
- 10.11 After the commissioning of the upgraded STW plant, it is recommended to monitor the TIN concentration in the vicinity of the outfall discharge since exceedances of TIN WQO limit were predicted. Water quality monitoring at least during the first 12 months after the commissioning of the STW would be required. Details of the water quality monitoring procedures are given in the EM&A manual prepared under the same Project.

### **Solid Waste Management**

- 10.12 Waste management during construction phase will be the contractor's responsibility to ensure that all wastes produced during the construction of the Project are handled, stored and disposed of in accordance with good waste management practices and EPD's regulations and requirements. The handling and disposal of dredged marine mud (if any) should also be a part of the waste management plan. The mitigation measures recommended should form the basis of the site waste management plan to be developed by the Contractor at the detailed design stage.
- 10.13 It is recommended that the waste arisings generated during the construction activities should be audited periodically to determine if wastes are being managed in accordance with the approved procedures and the site Waste Management Plan. The audits should look at all aspects of waste management including waste generation, storage, recycling, transport and disposal. An appropriate audit programme would be to undertake a first audit near the commencement of the construction works, and then to audit monthly thereafter.

## **Marine Ecology**

- 10.14 As monitoring and audit for water quality during both the construction phase and operational phase would be carried out (if open trench method is used for outfall construction), no specific EM&A is required for marine ecology.