

## Appendix 9.1 Implementation Schedule of Proposed Mitigation Measures

**Table 1 Implementation Schedule of Proposed Air Quality Mitigation Measures**

| EIA Ref # | Environmental Protection Measures / Mitigation Measures   | Location / Timing                          | Implementation Agent | Implementation Stages* |   |   |     | Relevant Legislation and Guidelines                  |
|-----------|---|--|----------------------|------------------------|---|---|-----|--|
|           |   |  |                      | Des                    | C | O | Dec |  |
| S3.8.1    | <p>Implementation of the Air Pollution Control (Construction Dust) Regulation and good site practices:</p> <ul style="list-style-type: none"> <li>• Use of regular watering, with complete coverage, to reduce dust emissions from exposed site surfaces and unpaved roads, particularly during dry weather.</li> <li>• Use of frequent watering for particularly dusty construction areas and areas close to ASRs.</li> <li>• Side enclosure and covering of any aggregate or dusty material storage piles to reduce emissions. Where this is not practicable owing to frequent usage, watering shall be applied to aggregate fines.</li> <li>• Open stockpiles shall be avoided or covered. Where possible, prevent placing dusty material storage piles near ASRs.</li> <li>• Tarpaulin covering of all dusty vehicle loads transported to, from and between site locations.</li> <li>• Establishment and use of vehicle wheel and body washing facilities at the exit points of the site.</li> <li>• Provision of wind shield and dust extraction units or similar dust mitigation measures at the loading points, and use of water sprinklers at the loading area where dust generation is likely during the loading process of loose material, particularly in dry seasons/ periods.</li> <li>• Imposition of speed controls for vehicles on unpaved site roads. Ten kilometers per hour is the recommended limit.</li> </ul> | Work site / During the construction period | Contractor           | √                      |   |   |     | Air Pollution Control (Construction Dust) Regulation |

## Appendix 9.1 Implementation Schedule of Proposed Mitigation Measures

| EIA Ref # | Environmental Protection Measures / Mitigation Measures  | Location / Timing   | Implementation Agent | Implementation Stages* |   |   |     | Relevant Legislation and Guidelines |
|-----------|--|---|----------------------|------------------------|---|---|-----|-------------------------------------|
|           |  |   |                      | Des                    | C | O | Dec |                                     |
|           | <ul style="list-style-type: none"> <li>Where possible, routing of vehicles and positioning of construction plant should be at the maximum possible distance from ASRs.</li> <li>Instigation of an environmental monitoring and auditing program to monitor the construction process in order to enforce controls and modify method of work if dusty conditions arise.</li> </ul> |   |                      |                        |   |   |     |                                     |
| S.3.8.2   | Deodorizers with 95% odour removal efficiency would be installed for the air ventilated from the storage area of sewage sludge and on-site wastewater treatment plant before discharge to the atmosphere   | Storage area of sewage sludge & on-site wastewater treatment plant/ During design & operation phase | STF Operator         | √                      |   | √ |     | EIAO-TM                             |
| S.3.8.2   | Air pollution control and stack monitoring system will be installed for the STF to ensure that the emissions from the STF stacks will meet the stringent target emission limits equivalent to those stipulated in Hong Kong and the European Commission for waste incineration.  | STF stack emissions / During design & operation phase   | STF Operator         | √                      |   | √ |     | EIAO-TM                             |

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

\* Des - Design, C - Construction, O – Operation, and Dec - Decommissioning

## Appendix 9.1 Implementation Schedule of Proposed Mitigation Measures

**Table 2 Implementation Schedule of Proposed Human Health Risk Mitigation Measures**

| EIA Ref # | Environmental Protection Measures / Mitigation Measures  | Location / Timing  | Implementation Agent | Implementation Stages* |   |   |     | Relevant Legislation and Guidelines |
|-----------|--|--|----------------------|------------------------|---|---|-----|-------------------------------------|
|           |  |  |                      | Des                    | C | O | Dec |                                     |
| S4.3.4    | <p><u>Human Health Risk Associated with Microbial Emissions from Dewatered Sewage Sludge</u></p> <p>The following risk control measures (identified as existing/expected safeguards) should be maintained/implemented when the STF is in operation to ensure the findings of the risk assessment remain valid:</p> <p><i>Sludge Collection</i></p> <ul style="list-style-type: none"> <li>• Apply good practice during unloading of dewatered sewage sludge to skip/container of transport vehicle</li> <li>• The dewatered sewage sludge unloading process should be supervised by workers on-site and drivers</li> </ul> <p><i>Sludge Transport</i></p> <ul style="list-style-type: none"> <li>• The workers handling the dewatered sewage sludge spillage at roads/sea in case of accident should wear personal protective equipment</li> </ul> <p><i>Sludge Reception and Handling at STF</i></p> <ul style="list-style-type: none"> <li>• Provide signage to assist driver to stop at appropriate unloading position</li> <li>• Provide sufficient training to drivers for the dewatered sewage sludge transporting vehicles</li> <li>• The on-site workers responsible for cleaning should wear personal protective equipment</li> <li>• Vehicle cleaning system should be provided to clean the dewatered sewage sludge transporting vehicle before they leave the STF</li> <li>• Monitor and control the traffic flow inside the reception hall of the STF</li> <li>• Provide signage for clear indication of vehicle traveling route</li> <li>• In case of manual dewatered sewage sludge is needed, the</li> </ul> | Sludge collection & transport and at the STF / During the operation period | STF Operator         |                        |   | √ |     |                                     |

## Appendix 9.1 Implementation Schedule of Proposed Mitigation Measures

| EIA Ref # | Environmental Protection Measures / Mitigation Measures  | Location / Timing | Implementation Agent | Implementation Stages* |   |   |     | Relevant Legislation and Guidelines |
|-----------|--|-------------------|----------------------|------------------------|---|---|-----|-------------------------------------|
|           |  |                   |                      | Des                    | C | O | Dec |                                     |
|           | <p>workers involved should wear personal protective equipment</p> <p><i>Temporary Sludge Storage at STF</i></p> <ul style="list-style-type: none"> <li>Detection device/alarm should be installed to prevent overfilling of temporary sludge storage tank</li> <li>Monitor and control the dewatered sewage sludge unloading process</li> <li>The on-site workers responsible for cleaning should wear personal protective equipment</li> <li>A safety margin should be considered for the design capacity of STF</li> <li>Emergency plan should be established and implemented to handle the situation of incineration units being down</li> </ul> <p><i>Sludge Incineration at STF</i></p> <ul style="list-style-type: none"> <li>Monitoring and control system should be installed to monitor and control the performance of incineration process</li> <li>In case of handling of incomplete combusted dewatered sewage sludge is needed, the workers involved should wear personal protective equipment</li> </ul> <p><i>Wash Down Facilities at STF</i></p> <ul style="list-style-type: none"> <li>The on-site workers responsible for cleaning should wear personal protective equipment</li> <li>Frequent and sufficient maintenance should be provided for the drainage system of STF</li> <li>Multiple outlets in drainage system should be designed and provided to reduce the likelihood of drainage blockage</li> </ul> <p><i>Maintenance and Repairing at STF</i></p> <ul style="list-style-type: none"> <li>Maintenance workers should wear personal protective equipment</li> </ul> |                   |                      |                        |   |   |     |                                     |

Appendix 9.1 Implementation Schedule of Proposed Mitigation Measures

| EIA Ref # | Environmental Protection Measures / Mitigation Measures   | Location / Timing   | Implementation Agent      | Implementation Stages* |   |   |   | Relevant Legislation and Guidelines |
|-----------|---|---|---------------------------|------------------------|---|---|---|-------------------------------------|
|           |   |   |                           | Des                    | C | O | Dec   |                                     |
|           | <p><u>Human Health Risk Associated with Radon</u></p> <p><i>Prevention of radon influx from the PFA to the STF buildings</i></p> <ul style="list-style-type: none"> <li>• A soil cover can be provided beneath the buildings on top of ash lagoon prior to construction works because it reduces the level of radon influx significantly</li> <li>• Slab-on-grade can be an option on foundation design</li> <li>• Soil suction can also prevent radon from entering the building by drawing the radon from below the building and venting it through a pipe, or pipes, to the air above the building.</li> </ul> <p><i>Provision of Sufficient ventilation of the interior of the STF buildings</i></p> <ul style="list-style-type: none"> <li>• Forced and natural ventilation should be introduced properly to enhance air exchange rate in the STF buildings.</li> <li>• Basement areas should be pressurized by using a fan to blow air into the basement areas from outdoors is suggested. This would create enough pressure at the lowest level indoors to prevent radon from entering into the STF buildings.</li> </ul> <p><i>Regular maintenance for the floor slabs and walls</i></p> <ul style="list-style-type: none"> <li>• Cracks and other openings in the foundation should be properly sealed to reduce radon ingress.</li> <li>• Sealing the cracks limits the flow of radon into the building thereby making other radon reduction techniques more effective and cost-efficient. It also reduces the loss of conditioned air.</li> </ul> <p><i>Radon concentration Measurement Prior to the occupation of the STF buildings</i></p> <ul style="list-style-type: none"> <li>• Radon concentration shall be measured by professional persons in accordance with EPD's ProPECC Note PN 1/99 Control of Radon Concentration in New Buildings Appendix 2, "Protocol of Radon Measurement for Non-</li> </ul> | STF buildings / During the design, construction and operation of the STF. | Contractor / STF Operator | √                      | √ | √ | EPD's ProPECC Note PN 1/99 Control of Radon Concentration in New Buildings Appendix 2 |                                     |

Appendix 9.1 Implementation Schedule of Proposed Mitigation Measures

| EIA Ref # | Environmental Protection Measures / Mitigation Measures   | Location / Timing | Implementation Agent | Implementation Stages* |   |   |     | Relevant Legislation and Guidelines |
|-----------|---|-------------------|----------------------|------------------------|---|---|-----|-------------------------------------|
|           |   |                   |                      | Des                    | C | O | Dec |                                     |
|           | residential Building” to ensure the radon concentration is in compliance with the guidance value. |                   |                      |                        |   |   |     |                                     |

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

\* Des - Design, C - Construction, O – Operation, and Dec - Decommissioning

## Appendix 9.1 Implementation Schedule of Proposed Mitigation Measures

**Table 3 Implementation Schedule of Proposed Waste Management Measures**

| EIA Ref # | Environmental Protection Measures / Mitigation Measures   | Location / Timing  | Implementation Agent | Implementation Stages* |   |   |     | Relevant Legislation and Guidelines                        |
|-----------|---|--|----------------------|------------------------|---|---|-----|--|
|           |   |  |                      | Des                    | C | O | Dec |  |
| S5.5.1    | <p><i>Good Site Practices</i></p> <p>Recommendations for good site practices during the construction activities include:</p> <ul style="list-style-type: none"> <li>• Nomination of an approved person, such as a site manager, to be responsible for good site practices, arrangements for collection and effective disposal to an appropriate facility, of all wastes generated at the site</li> <li>• Training of site personnel in proper waste management and chemical handling procedures</li> <li>• Provision of sufficient waste disposal points and regular collection of waste</li> <li>• Appropriate measures to minimize windblown litter and dust during transportation of waste by either covering trucks or by transporting wastes in enclosed containers</li> <li>• Regular cleaning and maintenance programme for drainage systems, sumps and oil interceptors.</li> </ul> | Work site / During the construction period                         | Contractor           | √                      |   |   |     | Waste Disposal Ordinance (Cap.354)<br>ETWB TCW No. 19/2005 |
| S5.5.1    | <p><i>Waste Reduction Measures</i></p> <p>Waste reduction is best achieved at the planning and design stage, as well as by ensuring the implementation of good site practices. Recommendations to achieve waste reduction include:</p> <ul style="list-style-type: none"> <li>• The design of the foundation works should minimize the amount of excavated material to be generated.</li> <li>• Excavated soil should be reused on site as far as possible, e.g. for landscape works, in order to minimize the amount of public fill to be disposed off-site.</li> <li>• Segregation and storage of different types of waste in different containers, skips or stockpiles to enhance reuse or recycling of</li> </ul>   | Work site / During planning & design stage, and construction stage | Contractor           | √                      |   |   |     |  |

## Appendix 9.1 Implementation Schedule of Proposed Mitigation Measures

| EIA Ref # | Environmental Protection Measures / Mitigation Measures  | Location / Timing                                     | Implementation Agent | Implementation Stages* |   |   |     | Relevant Legislation and Guidelines                                  |
|-----------|--|---|----------------------|------------------------|---|---|-----|--|
|           |  |   |                      | Des                    | C | O | Dec |  |
|           | <p>materials and their proper disposal.</p> <ul style="list-style-type: none"> <li>Encourage collection of aluminium cans by individual collectors by providing separate labelled bins to enable this waste to be segregated from other general refuse generated by the work force</li> <li>Proper storage and site practices to minimize the potential for damage or contamination of construction materials.</li> <li>Plan and stock construction materials carefully to minimize amount of waste generated and avoid unnecessary generation of waste.</li> </ul>  |   |                      |                        |   |   |     |  |
| S5.5.1    | <p><i>General Refuse</i></p> <p>General refuse should be stored in enclosed bins or compaction units separate from C&amp;D material. A reputable waste collector should be employed by the contractor to remove general refuse from the site, separately from C&amp;D material. Preferably an enclosed and covered area should be provided to reduce the occurrence of 'wind blown' light material.</p>  | Work site / During the construction period            | Contractor           |                        | √ |   |     | Public Health and Municipal Services Ordinance (Cap. 132)            |
| S5.5.1    | <p><i>Construction and Demolition Material</i></p> <p>In order to minimize the impact resulting from collection and transportation of C&amp;D material for off-site disposal, the excavated material arising from site formation and foundation works should be reused on-site as backfilling material and for landscaping works as far as practicable. Other mitigation requirements are listed below:</p> <ul style="list-style-type: none"> <li>A Waste Management Plan, which becomes part of the Environmental Management Plan, should be prepared in accordance with ETWB TCW No.19/2005.</li> <li>A recording system for the amount of wastes generated, recycled and disposed (including the disposal sites) should be proposed.</li> <li>In order to monitor the disposal of C&amp;D material at public filling facilities and landfills and to control fly-tipping, a trip-ticket</li> </ul> | Work site / During design stage & construction period | Contractor           | √                      | √ |   |     | ETWB TCW No. 33/2002<br>ETWB TCW No. 19/2005<br>ETWB TCW No. 31/2004 |



## Appendix 9.1 Implementation Schedule of Proposed Mitigation Measures

| EIA Ref # | Environmental Protection Measures / Mitigation Measures   | Location / Timing   | Implementation Agent | Implementation Stages* |   |   |     | Relevant Legislation and Guidelines                  |
|-----------|---|---|----------------------|------------------------|---|---|-----|--|
|           |   |   |                      | Des                    | C | O | Dec |  |
| S5.5.1    | <p>system should be included. One may make reference to ETWB TCW No. 31/2004 for details.</p> <p><i>Chemical Waste</i></p> <p>If chemical wastes are produced at the construction site, the Contractor would be required to register with the EPD as a Chemical Waste Producer and to follow the guidelines stated in the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes. Good quality containers compatible with the chemical wastes should be used, and incompatible chemicals should be stored separately. Appropriate labels should be securely attached on each chemical waste container indicating the corresponding chemical characteristics of the chemical waste, such as explosive, flammable, oxidizing, irritant, toxic, harmful, corrosive, etc. The Contractor shall use a licensed collector to transport and dispose of the chemical wastes, to either the Chemical Waste Treatment Centre at Tsing Yi, or another licensed facility, in accordance with the Waste Disposal (Chemical Waste) (General) Regulation.</p> | Work site / During the construction period  | Contractor           |                        | √ |   |     | Waste Disposal (Chemical Waste) (General) Regulation |
| S5.5.2    | <p><i>Storage, Handling, Treatment, Collection and Disposal of Incineration By-Products</i></p> <p>The following measures are recommended for the storage, handling and collection of the incineration by-products:</p> <ul style="list-style-type: none"> <li>• Ash should be stored in storage silos.</li> <li>• Ash should be handled and conveyed in closed systems fully segregated from the ambient environment.</li> <li>• Ash should be wetted with water to control fugitive dust, where necessary.</li> <li>• The wetted ash should be transported in covered trucks or containers to the designated landfill site.</li> </ul> <p>The STF Contractor should provide EPD with chemical analysis results</p>  | Storage, handling & collection of incineration ash at the STF / During the operation period | STF Operator         |                        |   | √ |     |  |

Appendix 9.1 Implementation Schedule of Proposed Mitigation Measures

| EIA Ref # | Environmental Protection Measures / Mitigation Measures   | Location / Timing | Implementation Agent | Implementation Stages* |   |   |     | Relevant Legislation and Guidelines |
|-----------|---|-------------------|----------------------|------------------------|---|---|-----|-------------------------------------|
|           |   |                   |                      | Des                    | C | O | Dec |                                     |
|           | of the incineration ash and flue gas cleaning residue to confirm that the ash/residue can comply with the proposed Incineration Residue Pollution Control Limits. |                   |                      |                        |   |   |     |                                     |

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

\* Des - Design, C - Construction, O – Operation, and Dec - Decommissioning

## Appendix 9.1 Implementation Schedule of Proposed Mitigation Measures

**Table 4 Implementation Schedule of Proposed Land Contamination Preventive Measures**

| EIA Ref # | Environmental Protection Measures / Mitigation Measures   | Location / Timing   | Implementation Agent     | Implementation Stages* |   |   |     | Relevant Legislation and Guidelines |
|-----------|---|---|--------------------------|------------------------|---|---|-----|-------------------------------------|
|           |   |   |                          | Des                    | C | O | Dec |                                     |
| S5.6.3    | <p><i>Fuel Oil Tank Construction and Test</i></p> <ul style="list-style-type: none"> <li>The fuel tank to be installed should be of specified durability</li> <li>Double skin tanks are preferable</li> <li>Underground fuel storage tank to be installed should be placed within a concrete pit</li> <li>The concrete pit shall be accessible to allow regular tank integrity tests to be carried out at regular intervals</li> <li>The tank integrity tests should be conducted by an independent qualified surveyor or structural engineer</li> <li>Any potential problems identified in the test should be rectified as soon as possible</li> </ul>   | Fuel Oil Storage Tank/ Design, Construction and Operation Phase               | Contractor/ STF Operator | √                      | √ | √ |     |                                     |
| S5.6.3    | <p><i>Fuel Oil Pipeline Construction and Test</i></p> <ul style="list-style-type: none"> <li>Installation of aboveground fuel oil pipelines is preferable; if underground pipelines are unavoidable, concrete lined trenches should be constructed to contain the pipelines</li> <li>Double skin pipelines are preferable</li> <li>Distance between the fuel oil refuelling points and the fuel oil storage tank shall be minimized</li> <li>The integrity tests for the pipelines should be conducted by an independent qualified surveyor or structural engineer at regular intervals</li> <li>Any potential problems identified in the test should be rectified as soon as possible</li> </ul> | Fuel Oil Pipelines/ Design, Construction and Operation Phase                  | Contractor/ STF Operator | √                      | √ | √ |     |                                     |
| S5.6.3    | <p><i>Fuel Oil Leakage Detection</i></p> <ul style="list-style-type: none"> <li>Installation of leak detection device at storage tank and pipelines</li> <li>Installation and use of pressure gauges (e.g. at the two ends of a filling line) in fuel filling, which allows unexpected pressure drop or difference and sign of leakage to be detected</li> </ul>  | Fuel Oil Storage Tank and Pipelines/ Design, Construction and Operation Phase | Contractor/ STF Operator | √                      | √ | √ |     |                                     |
| S5.6.3    | <p><i>Fuel Oil Storage Tank Refuelling</i></p> <ul style="list-style-type: none"> <li>Storage tank refuelling (from road tanker) should only be</li> </ul>  | Fuel Oil Refuelling Point/ Operation Phase                                    | STF Operator             |                        |   | √ |     |                                     |

## Appendix 9.1 Implementation Schedule of Proposed Mitigation Measures

| EIA Ref # | Environmental Protection Measures / Mitigation Measures  | Location / Timing            | Implementation Agent | Implementation Stages* |   |   |     | Relevant Legislation and Guidelines |
|-----------|--|------------------------------|----------------------|------------------------|---|---|-----|-------------------------------------|
|           |  |                              |                      | Des                    | C | O | Dec |                                     |
| S5.6.3    | <p>conducted by authorized staff of the oil company using the company's standard procedures</p> <p>An Oil Spill Response Plan should be prepared to document the appropriate response procedures for oil spillage incidents in detail. General procedures to be taken in case of fuel oil spillage are presented below.</p> <ul style="list-style-type: none"> <li>• Training <ul style="list-style-type: none"> <li>- Training on oil spill response actions should be given to relevant staff. The training shall cover the followings:- <ul style="list-style-type: none"> <li>&gt; Tools &amp; resources to combat oil spillage and fire, e.g. locations of oil spill handling equipment and fire fighting equipment;</li> <li>&gt; General methods to deal with oil spillage and fire incidents;</li> <li>&gt; Procedures for emergency drills in the event of oil spills and fire; and</li> <li>&gt; Regular drills shall be carried out.</li> </ul> </li> </ul> </li> <li>• Communication <ul style="list-style-type: none"> <li>- Establish communication channel with the Fire Services Department (FSD) and EPD to report any oil spillage incident so that necessary assistance from relevant department can be quickly sought.</li> </ul> </li> <li>• Response Procedures <ul style="list-style-type: none"> <li>- Any fuel oil spillage within the STF site should be immediately reported to the Plant Manager with necessary details including location, source, possible cause and extent of the spillage.</li> <li>- Plant Manager should immediately attend to the spillage and initiate any appropriate action to confine and clean up the</li> </ul> </li> </ul> | Whole Site / Operation Phase | STF Operator         |                        |   | √ |     |                                     |

## Appendix 9.1 Implementation Schedule of Proposed Mitigation Measures

| EIA Ref # | Environmental Protection Measures / Mitigation Measures  | Location / Timing  | Implementation Agent | Implementation Stages* |   |   |     | Relevant Legislation and Guidelines   |
|-----------|--|--|----------------------|------------------------|---|---|-----|---|
|           |  |  |                      | Des                    | C | O | Dec |   |
|           | <p>spillage. The response procedures shall include the following:</p> <ul style="list-style-type: none"> <li>- Identify and isolate the source of spillage as soon as possible.</li> <li>- Contain the oil spillage and avoid infiltration into soil/groundwater and discharge to storm water channels.</li> <li>- Remove the oil spillage.</li> <li>- Clean up the contaminated area.</li> <li>- If the oil spillage occurs during storage tank refuelling, the refuelling operation should immediately be stopped.</li> <li>- Recovered contaminated fuel oil and the associated material to remove the spilled oil should be considered as chemical waste.</li> </ul>   |  |                      |                        |   |   |     |   |
| S5.6.3    | <p><i>Chemicals and Chemical Wastes Storage</i></p> <ul style="list-style-type: none"> <li>● Chemicals and chemical wastes should only be stored in suitable containers in purpose-built areas</li> <li>● The storage of chemical wastes should comply with the requirements of the <i>Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes</i></li> <li>● The storage areas for chemicals and chemical wastes shall have an impermeable floor or surface. The impermeable floor/surface shall possess the following properties: <ul style="list-style-type: none"> <li>● Not liable to chemically react with the materials and their containers to be stored</li> <li>● Able to withstand normal loading and physical damage caused by container handling</li> <li>● The integrity and condition of the impermeable floor or surface should be inspected at regular intervals to ensure that it is satisfactorily maintained</li> </ul> </li> <li>● For liquid chemicals/chemical wastes storage, the storage area should be banded to contain at least 110% of the storage capacity of the largest containers or 20% of the total quantity of the chemicals/chemical wastes stored, whichever is the greater</li> <li>● Storage containers shall be checked at regular intervals for their</li> </ul> | Chemicals and Chemical Wastes Storage Area / Operation Phase | STF Operator         |                        |   | √ |     | Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes |

## Appendix 9.1 Implementation Schedule of Proposed Mitigation Measures

| EIA Ref# | Environmental Protection Measures / Mitigation Measures   | Location / Timing            | Implementation Agent | Implementation Stages* |   |   |     | Relevant Legislation and Guidelines |
|----------|---|------------------------------|----------------------|------------------------|---|---|-----|-------------------------------------|
|          |   |                              |                      | Des                    | C | O | Dec |                                     |
| S5.6.3   | <p>structural integrity and to ensure that the caps or fill points are tightly closed</p> <ul style="list-style-type: none"> <li>● Chemical filling shall be conducted by trained workers under supervision</li> </ul> <p>A Chemical and Chemical Wastes Spill Response Plan should be prepared to document the appropriate response procedures for oil spillage incidents in detail. General procedures to be undertaken in case of chemicals/ chemical waste spillages are presented below.</p> <ul style="list-style-type: none"> <li>● Training <ul style="list-style-type: none"> <li>- Training on spill response actions should be given to relevant staff. The training shall cover the followings:- <ul style="list-style-type: none"> <li>&gt; Tools &amp; resources to handle spillage, e.g. locations of spill handling equipment;</li> <li>&gt; General methods to deal with spillage; and</li> <li>&gt; Procedures for emergency drills in the event of spills.</li> </ul> </li> </ul> </li> <li>● Communication <ul style="list-style-type: none"> <li>- Establish communication channel with FSD and EPD to report the spillage incident so that necessary assistance from relevant department can be quickly sought.</li> </ul> </li> <li>● Response Procedures <ul style="list-style-type: none"> <li>- Any spillage within the STF site should be reported to the Plant Manager.</li> <li>- Plant Manager shall attend to the spillage and initiate any appropriate actions needed to confine and clean up the spillage. The response procedures shall include the followings:- <ul style="list-style-type: none"> <li>&gt; Identify and isolate the source of spillage as soon as possible;</li> <li>&gt; Contain the spillage and avoid infiltration into soil/ groundwater and discharge to storm water channels (in</li> </ul> </li> </ul> </li> </ul> | Whole Site / Operation Phase | STF Operator         |                        |   | √ |     |                                     |

## Appendix 9.1 Implementation Schedule of Proposed Mitigation Measures

| EIA Ref # | Environmental Protection Measures / Mitigation Measures   | Location / Timing   | Implementation Agent | Implementation Stages* |   |   |     | Relevant Legislation and Guidelines |
|-----------|---|---|----------------------|------------------------|---|---|-----|-------------------------------------|
|           |   |   |                      | Des                    | C | O | Dec |                                     |
|           | <p>case the spillage occurs at locations out of the designated storage areas);</p> <ul style="list-style-type: none"> <li>&gt; Remove the spillage; the removal method/ procedures documented in the Material Safety Data Sheet (MSDS) of the chemicals spilled should be observed;</li> <li>&gt; Clean up the contaminated area (in case the spillage occurs at locations out of the designated storage areas); and</li> <li>&gt; The waste arising from the cleanup operation should be considered as chemical wastes.</li> </ul> |   |                      |                        |   |   |     |                                     |
| S5.6.3    | <p><i>Measures for Incineration By-products Handling</i></p> <ul style="list-style-type: none"> <li>• Ash should be stored in storage silos</li> <li>• Ash should be handled and conveyed in closed systems fully segregated from the ambient environment</li> <li>• Ash should be wetted with water to control fugitive dust, where necessary</li> <li>• The wetted ash should be transported in covered trucks or containers to the designated landfill site</li> </ul>   | Storage, handling & collection of incineration ash at the STF / During the operation period | STF Operator         |                        |   | √ |     |                                     |
| S5.6.3    | After any spillage incident, an incident report should be prepared by the Plant Manager. The incident report should contain details of the incident including the cause of the incident, the material spilled and estimated spillage amount, and also the response actions taken. The incident record should be kept carefully and able to be retrieved when necessary.   | STF Site / Operation Phase  | STF Operator         |                        |   | √ |     |                                     |
| S5.6.3    | The incident report should provide sufficient details for the evaluation of any environmental impacts due to the spillage and assessment of the effectiveness of measures taken.  | STF Site / Operation Phase  | STF Operator         |                        |   | √ |     |                                     |
| S5.6.3    | In incidents that the spillage may result in significant land contamination, EPD should be informed immediately and the STF operator should be responsible for the clean up of the affected area.   | STF Site / Operation Phase  | STF Operator         |                        |   | √ |     |                                     |

## Appendix 9.1 Implementation Schedule of Proposed Mitigation Measures

| EIA Ref # | Environmental Protection Measures / Mitigation Measures   | Location / Timing | Implementation Agent | Implementation Stages* |   |   |     | Relevant Legislation and Guidelines |
|-----------|---|-------------------|----------------------|------------------------|---|---|-----|-------------------------------------|
|           |   |                   |                      | Des                    | C | O | Dec |                                     |
|           | The responses procedures described in Section 5.6.3.3 and Section 5.6.3.5 of the EIA Report should be followed accordingly together with the land contamination assessment and remediation guidelines stipulated in the <i>Guidance Manual for Use of Risk-based Remediation Goals for Contaminated Land Management and the Guidance Note for Contaminated Land and Remediation</i> . |                   |                      |                        |   |   |     |                                     |

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

\* Des - Design, C - Construction, O – Operation, and Dec - Decommissioning



## Appendix 9.1 Implementation Schedule of Proposed Mitigation Measures

**Table 5 Implementation Schedule of Proposed Water Pollution Control Measures**

| EIA Ref # | Environmental Protection Measures / Mitigation Measures  | Location / Timing                          | Implementation Agent | Implementation Stages* |   |   |     | Relevant Legislation and Guidelines |
|-----------|--|--|----------------------|------------------------|---|---|-----|-------------------------------------|
|           |  |  |                      | Des                    | C | O | Dec |                                     |
| S6.7.2    | <p><i>Construction Runoff and Drainage</i></p> <p>Site practices outlined in ProPECC PN 1/94 “Construction Site Drainage” shall be followed as far as practicable in order to minimize surface runoff and the chance of erosion:</p> <ul style="list-style-type: none"> <li>At the start of site establishment, internal drainage works and erosion and sedimentation control facilities shall be implemented. Channels, earth bunds or sand bag barriers shall be provided on site to direct stormwater to silt removal facilities. The detailed design and installation of the temporary on-site drainage system shall be undertaken by the contractor prior to the commencement of construction.</li> <li>Before commencing any site formation work, all sewer and drainage connections shall be sealed to prevent debris, soil, sand etc. from entering public sewers/drains.</li> <li>Boundaries of earthworks shall be surrounded by dykes or embankments for flood protection, as necessary.</li> <li>Sand/silt removal facilities such as sand traps, silt traps and sediment basins shall be provided to remove sand/silt particles from runoff to meet the standards of the Technical Memorandum under the Water Pollution Control Ordinance. The design of silt removal facilities shall be based on the guidelines provided in ProPECC PN 1/94. All drainage facilities and erosion and sediment control structures shall be inspected monthly and maintained to ensure proper and efficient operation at all times and particularly during rainstorms.</li> <li>Water pumped out from foundation piles shall be discharged into silt removal facilities.</li> <li>During rainstorms, exposed slope/soil surfaces shall be covered by a tarpaulin or other means, as far as practicable. Other measures that need to be implemented before, during and after rainstorms are summarized in ProPECC PN 1/94.</li> <li>Exposed soil areas shall be minimized to reduce potential for increased siltation and contamination of runoff.</li> <li>Earthwork final surfaces shall be well compacted and subsequent</li> </ul> | Work site / During the construction period | Contractor           | Des                    | C | O | Dec | ProPECC PN 1/94;<br>WPCO            |

## Appendix 9.1 Implementation Schedule of Proposed Mitigation Measures

| EIA Ref# | Environmental Protection Measures / Mitigation Measures  | Location / Timing                          | Implementation Agent | Implementation Stages* |   |   |                          | Relevant Legislation and Guidelines |
|----------|--|--|----------------------|------------------------|---|---|--------------------------|-------------------------------------|
|          |  |  |                      | Des                    | C | O | Dec                      |                                     |
|          | <p>permanent work or surface protection shall be immediately performed.</p> <ul style="list-style-type: none"> <li>Open stockpiles of construction materials or construction wastes on-site of more than 50m<sup>3</sup> shall be covered with tarpaulin or similar fabric during rainstorms.</li> <li>All vehicles shall be cleaned before leaving the works area to ensure no earth, mud and debris is deposited on roads. An adequately designed and sited wheel washing bay shall be provided at every site exit. The wheel washing facility shall be designed to minimize the intake of surface water (rainwater). Wash-water shall have sand and silt settled out and removed at least on a weekly basis to ensure the continued efficiency of the process.</li> </ul>   |  |                      |                        |   |   |                          |                                     |
| S6.7.2   | <p><i>General Construction Activities</i></p> <ul style="list-style-type: none"> <li>Debris and refuse generated on-site shall be collected, handled and disposed of properly to avoid entering the nearby water bodies and public drainage system. Stockpiles of cement and other construction materials shall be kept covered when not being used.</li> <li>Oils and fuels shall only be used and stored in designated areas which have pollution prevention facilities. To prevent spillage of fuels and solvents to nearby water bodies and public drains, all fuel tanks and storage areas shall be provided with locks and be sited on sealed areas, within bunds of a capacity equal to 110% of the storage capacity of the largest tank. The bund shall be drained of rainwater after a rain event.</li> </ul> | Work site / During the construction period | Contractor           | √                      |   |   | ProPECC PN 1/94;<br>WPCO |                                     |
| S6.7.2   | <p><i>Sewage Effluents</i></p> <ul style="list-style-type: none"> <li>Temporary sanitary facilities, such as portable chemical toilets, shall be employed on-site where necessary to handle sewage from the workforce. A licensed contractor would be responsible for appropriate disposal and maintenance of these facilities.</li> </ul>   | Work site / During the construction period | Contractor           | √                      |   |   | ProPECC PN 1/94;<br>WPCO |                                     |
| S6.7.2   | <i>Release of PFA Leachate from Ash Lagoon into the Aquatic Environment</i>  | Deep Bay                                   | Contractor           | √                      |   |   |                          |                                     |

Appendix 9.1 Implementation Schedule of Proposed Mitigation Measures

| EIA Ref # | Environmental Protection Measures / Mitigation Measures  | Location / Timing   | Implementation Agent | Implementation Stages* |   |   |     | Relevant Legislation and Guidelines |
|-----------|--|---|----------------------|------------------------|---|---|-----|-------------------------------------|
|           |  |   |                      | Des                    | C | O | Dec |                                     |
|           | <ul style="list-style-type: none"> <li>Environmental monitoring and audit (EM&amp;A) should be included to ensure that the foundation construction would not cause an unacceptable release of PFA leachate into the Deep Bay waters. The parameters to be measured should include the heavy metals such as cadmium, chromium and aluminium, which have the greatest tendency to leach from the lagooned PFA into the seawater. Details of the measurement requirements are presented in the EM&amp;A manual</li> </ul>               | Water outside the Ash Lagoon / During the construction period         |                      |                        |   |   |     |                                     |
| S6.7.3    | <p><i>Receiving Area at the STF</i></p> <ul style="list-style-type: none"> <li>An adequate number of drains shall be provided at the receiving area of the STF with drain piping for draining and cleaning all areas of the floor. The floors shall be adequately sloped to floor drains for collection of drainage water during cleaning. Such floor drains shall contain no traps. The drainage water shall be routed to an outdoor vented and trapped manhole for connection to the on-site wastewater treatment plant</li> </ul> | Receiving Area at the STF / During the operation period               | STF Operator         |                        | √ |   |     |                                     |
| S6.7.3    | <p><i>Wash Down Facilities at the STF</i></p> <ul style="list-style-type: none"> <li>Frequent and sufficient maintenance shall be provided for the drainage system, and multiple outlets in the drainage system shall be designed and provided to reduce the likelihood of drainage blockage.</li> </ul>   | Wash Down Facilities at the STF / During the operation period         | STF Operator         |                        | √ |   |     |                                     |
| S6.7.3    | <p><i>Temporary Sludge/GTW Storage at the STF</i></p> <ul style="list-style-type: none"> <li>A detection device/alarm shall be installed to prevent overflowing of temporary sludge/GTW storage tank.</li> </ul>   | Temporary Sludge/GTW Storage at the STF / During the operation period | STF Operator         |                        | √ |   |     |                                     |

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

\* Des - Design, C - Construction, O – Operation, and Dec - Decommissioning

## Appendix 9.1 Implementation Schedule of Proposed Mitigation Measures

**Table 6 Implementation Schedule of Proposed Ecological Mitigation Measures**

| EIA Ref # | Environmental Protection Measures/Mitigation Measures  | Location/ Timing   | Implementation Agent  | Implementation Stages*     |                            |                            |                            | Relevant Legislation and Guidelines |
|-----------|--|--|---|----------------------------|----------------------------|----------------------------|----------------------------|-------------------------------------|
|           |  |  |   | Des                        | C                          | O                          | Dec                        |                                     |
| S7.8.2    | <p><i>Measures to Minimize Disturbance Impact to Wildlife</i></p> <ul style="list-style-type: none"> <li>• Hoarding of 3m high shall be set up along the boundary of the works areas and associated site access to shield the fauna and breeding population of Little Grebe in the Middle Lagoon from the disturbance impact of machinery.</li> <li>• The works boundaries shall not go beyond the proposed Project Area. All work crews, equipment and human activities shall be confined within the designated works area only. No personnel should encroach or willfully disturb any wild animals and their habitats. Traffic and human access from the western side of the Project Area should be avoided.</li> <li>• Fencing with climbers or plantation shall be provided, where appropriate, along the STF site boundary and the two sides of access road to screen the surrounding habitats from the STF works areas.</li> </ul> | <p>Boundary of works areas/ Construction Phase</p> <p>Boundary of works areas/ Construction Phase</p> <p>Boundary of works areas/ Operation Phase</p>          | <p>Contractor</p> <p>Contractor</p> <p>Contractor</p>   | <p>√</p> <p>√</p> <p>√</p> | <p>√</p> <p>√</p> <p>√</p> | <p>√</p> <p>√</p> <p>√</p> | <p>√</p> <p>√</p> <p>√</p> | <p>ETWB TC (Works)</p>              |
| S7.8.2    | <p><i>Measures to Minimize Impact to natural habitats</i></p> <ul style="list-style-type: none"> <li>• Where practicable, all proposed works shall be conducted in existing built up area to minimize impact to natural habitats.</li> <li>• The abutment (permanent structure) for the vehicular bridge shall avoid streambed. The number and size of the temporary supporting structures to be installed over the streambed during construction shall be minimized as far as practicable.</li> <li>• The temporarily affected natural habitats, including streambed, shall be reinstated after the completion of works.</li> </ul>   | <p>Works areas/ Design and Construction Phase</p> <p>Vehicular bridge/ Design and Construction Phase</p> <p>Works Area/ Operation Phase</p> <p>Works Area/</p> | <p>STF Designer/ Contractor</p> <p>STF Designer/ Contractor</p> <p>Contractor</p> <p>Contractor</p> | <p>√</p> <p>√</p> <p>√</p> | <p>√</p> <p>√</p> <p>√</p> | <p>√</p> <p>√</p> <p>√</p> | <p>ETWB TC (Works)</p>     |                                     |

## Appendix 9.1 Implementation Schedule of Proposed Mitigation Measures

| EIA Ref # | Environmental Protection Measures/Mitigation Measures   | Location/ Timing               | Implementation Agent | Implementation Stages* |   |   |   | Relevant Legislation and Guidelines |
|-----------|---|--------------------------------|----------------------|------------------------|---|---|---|-------------------------------------|
|           |   |                                |                      | Des                    | C | O | Dec   |                                     |
| S7.8.2    | <ul style="list-style-type: none"> <li>For affected natural stream section, placement of substrates of similar size and composition to those of original streambed shall be considered to encourage colonization.</li> </ul> <p><i>Minimise sedimentation/water quality impacts to waterbodies</i></p> <ul style="list-style-type: none"> <li>Measures to control potential sedimentation/ water quality impacts during the construction phase shall be implemented.</li> <li>To minimize the potential water quality impacts from the construction works located at any river channels, natural streams or seafont, the practices outlined in ETWB TC (Works) No. 5/2005 “Protection of natural streams/rivers from adverse impacts arising from construction works” shall be adopted where applicable.</li> </ul>   | Operation Phase                | Contractor           |                        | √ |   | No. 5/2005 Protection of natural streams/ rivers from adverse impacts arising from construction works                 |                                     |
| S7.8.2    | <p><i>Minimize noise disturbance</i></p> <ul style="list-style-type: none"> <li>Noise mitigation measures including the use of quieter piling machinery and construction plants shall be implemented to lower the noise level due to construction works.</li> <li>Only well-maintained plant shall be operated on-site and plant shall be serviced regularly during the construction programme.</li> <li>Machines and plant which may be in intermittent use shall be shut down to a minimum.</li> <li>Plant known to emit noise strongly in one direction, shall be oriented so that the noise is directed away from the Middle Lagoon, where possible.</li> <li>Silencers or mufflers on construction equipment shall be utilized and shall be properly maintained during the construction period.</li> <li>Mobile plant (such as generator) shall be sited as far away from the</li> </ul> | Whole Site/ Construction Phase | Contractor           | √                      |   |   | ETWB TC (Works) No. 5/2005 Protection of natural streams/ rivers from adverse impacts arising from construction works |                                     |

## Appendix 9.1 Implementation Schedule of Proposed Mitigation Measures

| EIA Ref # | Environmental Protection Measures/Mitigation Measures   | Location/ Timing  | Implementation Agent         | Implementation Stages* |   |   |     | Relevant Legislation and Guidelines |
|-----------|---|---|------------------------------|------------------------|---|---|-----|-------------------------------------|
|           |   |   |                              | Des                    | C | O | Dec |                                     |
|           | <p>Middle Lagoon as possible.</p> <ul style="list-style-type: none"> <li>Material stockpiles and other structures shall be effectively utilized, where practicable, to screen noise from on-site construction activities.</li> </ul>  |   |                              |                        |   |   |     |                                     |
| S7.8.2    | <p><i>Minimise General Disturbance in Construction Phase:</i></p> <ul style="list-style-type: none"> <li>Placement of equipment or stockpile in designated works areas and access routes selected on existing roads to minimize disturbance to natural habitats.</li> <li>Construction activities shall be restricted to works areas that shall be clearly demarcated. Access to areas of the ash lagoon outside the works areas shall be strictly prohibited.</li> <li>Waste skips shall be provided to collect general refuse and construction wastes. The wastes shall be disposed of timely and properly off-site.</li> <li>Drainage arrangements shall include sediment traps to control construction run-off.</li> <li>Open burning on works sites is illegal, and shall be strictly prohibited, temporary fire fighting equipment in the works areas shall be provided to prevent any open fire.</li> <li>Erect fences along the boundary of works areas before the commencement of works to prevent tipping, vehicle movements, and encroachment of personnel into adjacent areas.</li> </ul> | Whole Site/<br>Construction<br>Phase                          | Contractor                   | √                      |   |   |     |                                     |
| S7.8.3    | <p><i>Measures to Mitigate the Loss of Vegetation</i></p> <ul style="list-style-type: none"> <li>All vegetation located within the work areas shall be preserved as far as practicable.</li> </ul>  | Whole Site/<br>Design,<br>Construction and<br>Operation Phase | Contractor / STF<br>Operator | √                      | √ | √ |     |                                     |

## Appendix 9.1 Implementation Schedule of Proposed Mitigation Measures

| EIA Ref # | Environmental Protection Measures/Mitigation Measures  | Location/ Timing  | Implementation Agent      | Implementation Stages* |   |   |     | Relevant Legislation and Guidelines |
|-----------|--|---|---------------------------|------------------------|---|---|-----|-------------------------------------|
|           |  |   |                           | Des                    | C | O | Dec |                                     |
| S7.8.4    | <ul style="list-style-type: none"> <li>To compensate for the loss of the vegetation and habitats, tree planting shall be provided in the site area where possible. Species chosen for planting shall be similar to the species identified in the survey and be native to Hong Kong or the Southern China.</li> </ul> <p><i>Enhancement Measures to Create Additional Habitat for Little Grebe</i></p> <ul style="list-style-type: none"> <li>An additional habitat for Little Grebe shall be created in a less disturbed area located at the northeastern part of the proposed STF.</li> <li>The created habitat shall be provided in form of shallow pond(s) incorporating suitable habitat characteristics for Little Grebe. The water level of the created pond shall be kept between 1.5 m to 2 m.</li> <li>Emergent vegetation shall be planted and fish population shall be controlled to allow development of aquatic invertebrate populations as prey of Little Grebe.</li> <li>To screen the created habitat from disturbance due to nearby landfill traffic, planting of native plants shall be provided on the boundary of the pond(s) as appropriate.</li> <li>Prior to construction of the pond(s), detailed Habitat Creation and Management Plan (HCMP) of the created habitat prepared by experienced ecologist(s) with over seven year experience in relevant field shall be circulated to relevant departments including AFCD for comment.</li> </ul> | Within Project Area/ Design Phase, Construction and Operation Phase | Contractor / STF Operator | √                      | √ | √ |     |                                     |

# 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 and Dec – Decommissioning

## Appendix 9.1 Implementation Schedule of Proposed Mitigation Measures

**Table 7 Implementation Schedule for Landscape and Visual Impact**

| EIA Ref #       | Environmental Protection Measures / Mitigation Measures  | Location / Timing   | Implementation Agent | Implementation Stages* |   |   |     | Relevant Legislation and Guidelines |
|-----------------|--|---|----------------------|------------------------|---|---|-----|-------------------------------------|
|                 |  |   |                      | Des                    | C | O | Dec |                                     |
| Table 9.4 CM-01 | <u>Contaminant/ Sediment Control</u> – Suitable temporary barriers, covers and drainage provisions shall be provided around construction works to avoid discharge of contaminants (such as bleeding from in-situ concrete works) and sediments into sensitive water-based habitats, especially the tidal streams and the mangrove.   | Work site / During the construction period                        | Contractor           |                        | √ |   |     |                                     |
| Table 9.4 CM-02 | <u>Early Planting of Tall Trees</u> – Tall trees proposed under mitigation measure OM-02 shall be planted early, providing visual effect also during construction.   | Work site / During the construction period                        | Contractor           |                        | √ |   |     |                                     |
| Table 9.4 CM-03 | <u>Good Site Practice</u> – Construction activities should be restricted to works areas and should be clearly demarcated onsite. Piling of construction materials onsite shall be carefully considered for possible impacts before carrying out.   | Work site / During the construction period                        | Contractor           |                        | √ |   |     |                                     |
| Table 9.4 CM-04 | <u>Existing Trees within Works Areas</u> – All existing trees within work sites shall be properly maintained and protected for their crowns, trunks and roots.   | Work site / During the construction period                        | Contractor           |                        | √ |   |     |                                     |
| Table 9.4 OM-01 | <u>Sensitive Bridge Design</u> – The bridge of the proposed access road shall be sensitively designed to minimize impact to the tidal stream and mangrove. It shall be constructed with minimal use of in-situ concreting and with maximum use of precast or prefabricated elements. No pile or support shall be erected within the stream channel.  | Bridge of access road / During the design & construction phases   | Contractor           | √                      | √ |   |     |                                     |
| Table 9.4 OM-02 | <u>Tall trees for Chimney</u> – Fast-growing tall trees shall be planted along the east side of the ash-lagoon to counterbalance possible exotic silhouettes, such as from the chimney, of the proposed sludge treatment facilities for sensitive viewers in Pak Nai. The trees shall be planted during the early stage of the construction to ensure effectiveness during operation. They will also help to lessen the visual impact during construction, as already suggested in mitigation measure CM-02. | East side of ash lagoon / During the design & construction phases | Contractor           | √                      | √ |   |     |                                     |



## Appendix 9.1 Implementation Schedule of Proposed Mitigation Measures

| EIA Ref #       | Environmental Protection Measures / Mitigation Measures  | Location / Timing  | Implementation Agent | Implementation Stages* |   |   |     | Relevant Legislation and Guidelines |
|-----------------|--|--|----------------------|------------------------|---|---|-----|-------------------------------------|
|                 |  |  |                      | Des                    | C | O | Dec |                                     |
| Table 9.4 OM-03 | <u>Suitable Reinstatement at Ash-lagoon</u> – Affected perimeter of the proposed works area within the ash-lagoon shall be reinstated with suitable planting materials. Traditional reinstatement planting approach for construction projects may not work well for this project. Certain existing grasses and small shrubs have self-seeded the ash-lagoon, demonstrating their tolerance to salts, alkalinity and possible trace metals in the ash. Therefore the same or similar species of vegetation shall be used. | Perimeter of works area / During the design & construction phases                | Contractor           | √                      | √ |   |     |                                     |
| Table 9.4 OM-04 | <u>Existing Tree Transplanting</u> – The proposed access roadworks may affect few existing trees, which shall be transplanted as far as practical. A comprehensive tree survey is recommended to locate these trees.   | Access road / During the design & operation phases                               | Contractor           | √                      | √ |   |     |                                     |
| Table 9.4 OM-05 | <u>Planting at Road Intersection</u> – Suitable planting of woodland trees and shrubs shall be provided for the proposed access roadworks at the junction with Nim Wan Road.   | Junction of access road with Nim Wan Road / During the design & operation phases | Contractor           | √                      | √ |   |     |                                     |

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

\* Des - Design, C - Construction, O – Operation, and Dec - Decommissioning

Appendix 9.1 Implementation Schedule of Proposed Mitigation Measures

Table 8 Implementation Schedule of Proposed Landfill Gas Hazard Protection Measures

| EIA Ref # | Environmental Protection Measures/Mitigation Measures   | Location/ Timing   | Implementation Agent | Implementation Stages* |   |   |     | Relevant Legislation and Guidelines |
|-----------|---|--|----------------------|------------------------|---|---|-----|-------------------------------------|
|           |   |  |                      | Des                    | C | O | Dec |                                     |
| S10.7.2   | <u>Appointment of Safety Officer</u><br>Appoint a properly trained safety officer and provide with appropriate equipment to measure and monitor LFG hazard.   | Work Site /<br>During the construction phase                                   | Contractor           | ✓                      |   |   |     |                                     |
| S10.7.2   | <u>Safety Measures - Excavation</u><br>Staff should receive appropriate training on working in areas susceptible to landfill gas, fire and explosion hazards. Excavation procedures and code of practice should be implemented.   | Work Site /<br>During the construction phase                                   | Contractor           | ✓                      |   |   |     |                                     |
| S10.7.2   | <u>Safety Measures – Welding, Flame-Cutting and Hot works</u><br>Hot works should be confined to open areas away from any trench or excavation. Should hot works must be carried out in trenches or confined space, “permit to work” procedures should be followed.   | Work Site /<br>During the construction phase                                   | Contractor           | ✓                      |   |   |     |                                     |
| S10.7.2   | <u>Safety Measures – Enclosed Spaces</u><br>Site offices or buildings located within WENT Landfill Consultation Zone which have the capacity to accumulate landfill gas, then they should either be located in an area which has been proven to be free of landfill gas; or be raised clear of the ground by a minimum of 500mm.  | Enclosed Spaces within WENT Consultant Zone /<br>During the construction phase | Contractor           | ✓                      |   |   |     |                                     |
| S10.7.2   | <u>Safety Measures – Electrical Equipment</u><br>Any electrical equipment, such as motors and extension cords, should be intrinsically safe.  | Work Site /<br>During the construction phase                                   | Contractor           | ✓                      |   |   |     |                                     |
| S10.7.2   | <u>Safety Measures – Piping</u><br>During piping assembly or conduiting construction, all valves/seals should be closed immediately after installation. As construction progresses, all valves/seals should be closed as installed to prevent the migration of gases through the pipeline/conduit. All piping/conduiting should be capped at the end of each working day. | Work Site /<br>During the construction phase                                   | Contractor           | ✓                      |   |   |     |                                     |
| S10.7.2   | <u>Safety Measures – Fire Safety</u><br>Adequate fire safety equipments should be provided on site. Workers   | Work Site /<br>During the  | Contractor           | ✓                      |   |   |     |                                     |

## Appendix 9.1 Implementation Schedule of Proposed Mitigation Measures

| EIA Ref # | Environmental Protection Measures/Mitigation Measures   | Location/ Timing   | Implementation Agent | Implementation Stages* |   |   |     | Relevant Legislation and Guidelines |
|-----------|---|--|----------------------|------------------------|---|---|-----|-------------------------------------|
|           |   |  |                      | Des                    | C | O | Dec |                                     |
|           | and visitors should be notified of the potential fire hazards. Safety notices should be posted around the site warning the anger and potential hazards.   | construction phase   |                      |                        |   |   |     |                                     |
| S10.7.2   | <u>Safety Measures – Confined Spaces</u><br>Precautionary measures should include ensuring that staff members are aware of the potential hazards of working in confined spaces, and that appropriate monitoring procedures are in place to prevent hazards in confined spaces.  | Confined Spaces at Work Site / During the construction phase | Contractor           | √                      |   |   |     |                                     |
| S10.7.2   | <u>Monitoring</u><br>Periodically during ground-works within the Consultation Zone, the works area should be monitored for methane, carbon dioxide and oxygen using appropriately calibrated portable gas detection equipment. The monitoring frequency and areas to be monitored shall be set down prior to commencement of ground-works. Depending on the results of the measurements, actions required will vary. As a minimum these should encompass those actions specified in Table 10.6 of the EIA Report. | Work Site / During the construction phase                    | Contractor           | √                      |   |   |     |                                     |
| S10.7.3   | <u>Gas Barrier</u><br>A cut-off trench barrier to should be built along in between the boundary of the STF site facility and the existing WENT landfill. In addition, in the WENT extension project, a cut-off trench barrier will be built along the boundary between the STF and the WENT Extension under the WENT Extension project. This will cut off any gas migration to the STF from WENT extension.   | Along STF boundary/ During the design phase                  | STF Designer         | √                      |   |   |     |                                     |
| S10.7.3   | <u>Building Protection Design Measure</u><br>Passive control measures (such as gas-resistant polymeric membranes, synthetic composite geotextile, clear void under the structure, etc) for buildings structures with ground level or below ground rooms / voids.  | Buildings within STF/ During the design phase                | STF Designer         | √                      |   |   |     |                                     |
| S10.7.3   | <u>Design Measures for Sub-surface Building Services</u><br>As shown in Figure 10.4b - Figure 10.4f of the EIA Report, generic protection measures (such as barriers made of HDPE, vent pipes, etc) for the design measures for sub-surface building services.  | Building services/ During the design phase                   | STF Designer         | √                      |   |   |     |                                     |

## Appendix 9.1 Implementation Schedule of Proposed Mitigation Measures

| EIA Ref # | Environmental Protection Measures/Mitigation Measures  | Location/ Timing   | Implementation Agent | Implementation Stages* |   |   |     | Relevant Legislation and Guidelines  |
|-----------|--|--|----------------------|------------------------|---|---|-----|--|
|           |  |  |                      | Des                    | C | O | Dec |  |
| S10.7.3   | <p><u>Guidance for Entry into Service Rooms / Voids, Manholes and Chamber</u><br/>                     Safety Guide to Working in Confined Spaces should be followed to ensure compliance with the Factories and Industrial Undertakings (Confined Spaces) Regulation.</p> <p>In general, appropriate safety equipments should be available for works in confined spaces. Workers and Supervisors should be trained. A permit-to-work system for entry should be developed and consistently employed. The safety measures recommended in Chapter 8 of the Landfill Gas Hazard Assessment Guidance Note should also be strictly followed.</p> | Service Rooms<br>Voids, Manholes<br>and Chamber /<br>During the<br>operation phase | STF Operator         |                        |   | √ |     | Safety Guide to Working in Confined Spaces<br>Factories and Industrial Undertakings (Confined Spaces) Regulation |
| S10.7.3   | <p><u>Landfill Gas Monitoring During Operation</u><br/>                     Regular Monitoring of landfill gas should be done at the above wells as well as underground (service voids and manholes) by the STF contractor. Monitoring is required to verify the effectiveness and to ensure the continued performance of the implemented protection measures.</p>   | Service Rooms<br>Voids, Manholes<br>and Chamber /<br>During the<br>operation phase | STF Operator         |                        |   | √ |     |  |

# 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 and Dec – Decommissioning