

**B. IMPLEMENTATION SCHEDULE OF THE PROPOSED MITIGATION MEASURES**

**Table B.1 Implementation Schedule of the Proposed Mitigation Measures for Air Quality Impact**

EIA Ref.	EM&A Manual Ref.	Environmental Protection Measures	Objectives of the Measures	Location / Duration of Measures/ Timing of Completion of Measures	Implementation Agent	Implementation Stages**			Relevant Legislation and Guidelines	Tools/ Mechanism for Implementation
						Des	C	O		
3.7.1.1	2.2	Implement the following dust suppression measures as stipulated under the Air Pollution Control (Construction Dust) Regulation (Cap. 311R), good site practices and good housekeeping of the site: <ul style="list-style-type: none"> <li>• Use of regular watering, to reduce dust emissions from exposed site surfaces and unpaved roads particularly during dry weather;</li> <li>• Use of frequent watering in particularly dusty construction areas close to ASRs;</li> <li>• Use of frequent watering or water sprinklers for major haul roads, material stockpiling areas and other dusty activities within the construction site;</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 should be applied to aggregate fines;</li> <li>• For the work sites close to the ASR with a separation distance less than 5m, provide hoardings of not less than 5m high from ground level along the site boundary; for the work sites close to the ASRs with a separation distance between 5m and 10 m, provide hoardings of not less than 3.5 m high from ground level along the site boundary; for other work sites, provide hoardings of not less than 2.4 m high from ground level along the site boundary except for site entrance or exit;</li> <li>• Open temporary stockpiles should be avoided or covered. Prevent placing dusty material storage plies 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</li> </ul>	To minimise construction dust nuisance	All construction sites / construction phase / upon completion of all construction activities	Contractor		✓		- Air Pollution Control Ordinance (APCO) (Cap. 311) - Air Pollution Control (Construction Dust) Regulation (Cap. 311R)	- Pollution control regulations - EM&A

\*\* Des – Design, C – Construction, and O – Operation

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		<p>washing facilities at the exit point of the site;</p> <ul style="list-style-type: none"> <li>• Imposition of speed control for vehicles on unpaved site roads. 8 km/hr is the recommended limit;</li> <li>• Routing of vehicles and positioning of construction plants should be at the maximum possible distance from ASRs;</li> <li>• Avoid position of material stockpiling areas, major haul roads and dusty works within the construction site close to concerned ASRs;</li> <li>• Avoid unnecessary exposed earth; and</li> <li>• During or after the de-bagging process, the use of cement or dry pulverised fuel ash should be conducted in a totally enclosed system or facility and effective air pollution control measures should be placed at any exits or exhaust to avoid potential air quality influence.</li> </ul>								
3.7.1.2	2.2	<p>Incorporate the below guidelines on construction control from EPD's Recommended Pollution Control Clauses for Construction Contracts in the contract documents:</p> <ul style="list-style-type: none"> <li>• The Contractor shall observe and comply with the APCO and its subsidiary regulations, particularly the Air Pollution Control (Construction Dust) Regulation.</li> <li>• The Contractor shall undertake at all times to prevent dust nuisance as a result of the construction activities.</li> <li>• The Contractor shall ensure that there will be adequate water supply / storage for dust suppression.</li> <li>• The Contractor shall devise and arrange methods of working and carrying out the works in such a manner so as to minimise dust impacts on the surrounding environment, and shall provide experienced personnel with suitable training to ensure that these methods are implemented.</li> <li>• Before the commencement of any work, the Contractor may be required to submit the methods of working, plant, equipment and air pollution control system to be</li> </ul>	To minimise construction dust nuisance	All construction sites / construction phase / upon completion of all construction activities	Contractor		✓		<ul style="list-style-type: none"> <li>- APCO</li> <li>- Air Pollution Control (Construction Dust) Regulation</li> <li>- EPD's Recommended Pollution Control Clauses for Construction Contracts</li> </ul>	<ul style="list-style-type: none"> <li>- Pollution control regulations</li> <li>- EM&amp;A</li> </ul>

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		used on the site for the Engineer inspection and approval.								
3.7.1.3	2.2	Follow the requirements as stipulated in Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation and implement the below measures: <ul style="list-style-type: none"> <li>• Connect construction plant and equipment to mains electricity supply and avoid use of diesel generators and diesel-powered equipment;</li> <li>• Deploy electrified NRMMS as far as practicable; and</li> <li>• Use of exempted NRMMS not allowed.</li> </ul>	To minimise exhaust emission from non-road mobile machinery	All construction sites / construction phase / upon completion of all construction activities	Contractor		✓		- Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation - Air Pollution Control (Fuel Restriction) Regulation	- Pollution control regulations - EM&A
3.7.1.4	2.2	<ul style="list-style-type: none"> <li>• The odorous materials from desilting works and excavation at nullah bed should be well covered on site with tarpaulin and placed as far away from the ASRs as possible.</li> <li>• These odorous materials should be removed off-site for disposal as soon as possible within 24 hours.</li> <li>• During transportation, these odorous materials on the trucks should be properly covered by tarpaulin.</li> </ul>	To minimise odour nuisance from desilting / excavated materials	All construction sites / construction phase / upon completion of all construction activities	Contractor		✓		- Air Pollution Control Ordinance (APCO)	- Pollution control regulations - EM&A

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**Table B.2 Implementation Schedule of the Proposed Mitigation Measures for Noise Impact**

EIA Ref.	EM&A Manual Ref.	Environmental Protection Measures	Objectives of the Measures	Location / Duration of Measures/ Timing of Completion of Measures	Implementation Agent	Implementation Stages**			Relevant Legislation and Guidelines	Tools/ Mechanism for Implementation
						Des	C	O		
4.8.1.1	3.2	<p><u>Good Site Practices</u> The site practices listed below should be followed during construction works:</p> <ul style="list-style-type: none"> <li>• Only well-maintained PME to be operated on site and should be serviced regularly during construction</li> <li>• Silencers or mufflers on construction equipment should be utilised (if appropriate) and should be properly maintained during the construction;</li> <li>• Mobile plant, if any, should be sited as far away from NSRs as possible</li> <li>• Machines and plant (such as trucks) that may be in intermittent use should be shut down between work periods or should be throttled down to a minimum</li> <li>• Plant known to emit noise strongly in one direction should, wherever possible, be orientated to direct noise away from the nearby NSRs</li> <li>• Material stockpiles and other structures should be effectively utilised, wherever practicable, in screening noise from on-site construction activities</li> </ul>	To minimise construction noise nuisance arising from the Project	All construction sites / construction phase / upon completion of all construction activities	Contractor		✓		- EIAO-TM -	- EM&A
4.8.1.3 – 4.8.1.5	3.2	<p><u>Use of Quality PME / Quieter Construction Method</u> Use Quality PME (QPME) for Hand-held Percussive Breaker, Excavator/loader, wheeled/tracked, Roller, vibratory, Crane, mobile/barge mounted (diesel), and Crane, mobile/barge mounted (diesel) and quieter construction method such as silent piling by press-in method using Giken Piler and Power-pack is adopted as an alternative of traditional sheet piling.</p> <ul style="list-style-type: none"> <li>• The Contractors may adopt alternative quiet PME / construction method as long as it can be demonstrated that they would not result in construction noise impacts worse than those predicted in this EIA Report.</li> </ul>	To mitigate the adverse construction noise impact arising from the Project at the affected NSRs	All active construction sites / construction phase / upon completion of all construction activities	Contractor		✓		- EIAO-TM -	- EM&A
4.8.1.6 – 4.8.1.7	3.2	<p><u>Use of Movable Noise Barriers</u> • Use movable noise barriers for PMEs as listed in</p>	To mitigate the adverse	All active construction sites / construction	Contractor		✓		- EIAO-TM -	- EM&A

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						Des	C	O		
		Appendix 4.6 of EIA Report.	construction noise impact arising from the Project at the affected NSRs	phase / upon completion of all construction activities						

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**Table B.3 Implementation Schedule of the Proposed Mitigation Measures for Water Quality Impact**

EIA Ref.	EM&A Manual Ref.	Environmental Protection Measures	Objectives of the Measures	Location / Duration of Measures/ Timing of Completion of Measures	Implementation Agent	Implementation Stages**			Relevant Legislation and Guidelines	Tools/ Mechanism for Implementation
						Des	C	O		
Mitigation Measures for Construction Phase Water Quality Impacts										
5.8.1.1	4.2	All effluent discharged from the construction site should comply with the standards stipulated in the Technical Memorandum on Standards for Effluents Discharged into Drainage and Sewerage Systems, Inland and Coastal Waters (TM-DSS). There is a need to apply to EPD for a discharge licence for discharge of effluent from the construction site under the WPCO. The discharge quality must meet the requirements specified in the discharge licence. All the runoff and wastewater generated from the works areas should be treated so that it satisfies all the standards listed in the TM-DSS. If monitoring of the treated effluent quality from the works areas is required during the construction phase of the Project, the monitoring should be carried out in accordance with the relevant WPCO licence.	To avoid water quality impacts from polluted site discharges.	All construction sites / construction phase / upon completion of all construction activities	Contractor		✓		- Water Pollution Control Ordinance (WPCO) - TM-DSS	- Pollution control regulations - EM&A
5.8.1.1 – 5.8.1.14	4.2	<u>Wastewater from General Construction Activities and Construction Site Run-off</u> Implement Best Management Practices (BMPs) of mitigation measures in controlling water pollution to achieve control of potential pollution of nearby water bodies during the construction phase of the Project. The guidelines for handling and disposal of the following types of construction site discharges as detailed in the ProPECC PN 1/94 "Construction Site Drainage" should be followed, where applicable: <ul style="list-style-type: none"> <li>• Construction Site Run-off</li> <li>• Boring and Drilling Water</li> <li>• Wheel Washing Water</li> <li>• Rubbish and Litter</li> <li>• Acid Cleaning, Etching and Pickling Wastewater</li> </ul>	To prevent water pollution from uncontrolled wastewater discharge / construction site runoff so as to avoid / minimise water quality impacts	All construction sites / construction phase / upon completion of all construction activities	Contractor		✓		- EIAO-TM - The Practice Note for Professional Persons on Construction Site Drainage (ProPECC PN 1/94)	- Pollution control regulations - EM&A

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						Des	C	O		
5.8.1.15	4.2	<p><u>Construction Works in Close Proximity of Inland Waters</u> Adopt the precautionary measures / practices outlined in <b>ETWB TC (Works) No. 5/2005</b> “<i>Protection of natural streams/rivers from adverse impacts arising from construction works</i>” where applicable, such as the followings:</p> <ul style="list-style-type: none"> <li>• The use of less or smaller construction plants may be specified in areas close to the watercourses</li> <li>• Temporary storage of materials (e.g. equipment, chemicals and fuel) and temporary stockpile of construction materials should be located well away from any watercourses when carrying out of the construction works.</li> <li>• Stockpiling of construction materials and dusty materials should be covered and located away from any watercourses.</li> <li>• Construction debris and spoil should be covered up and / or disposed of as soon as possible.</li> <li>• Proper shoring may need to be erected.</li> </ul>	To prevent / minimise water pollution from construction works in close proximity to inland water	All construction sites / construction phase / upon completion of all construction activities	Contractor		✓		- ETWB TC (Works) No. 5/2005	- EM&A
5.5.1.1	4.2	The Contractor should communicate and coordinate with DSD and CEDD to avoid overlapping of the proposed desilting works at downstream tidal zone with their routine maintenance desilting works as far as practicable.	To minimise the potential water quality impact	Desilting works at downstream tidal zone / construction phase	Contractor				N/A	- EM&A
5.8.1.16 – 5.8.1.18	4.2	<p><u>Construction Works at Fo Tan Nullah</u> Construction works within the nullah should be scheduled in dry season when the flow is low. Precautionary / pollution control measures listed below for site demarcation and flow diversion with physical barriers / temporary drainage should be implemented prior to the construction works within channel to ensure that all the construction works would be undertaken in dry conditions and physically separated from downstream.</p> <ul style="list-style-type: none"> <li>• Physical barriers with impermeable liners will be deployed to confine the works area to maintain a dry</li> </ul>	To prevent / minimise water pollution from construction works at FTN	All construction sites / construction phase / upon completion of all construction activities	Contractor		✓		- WPCO - EIAO-TM - ETWB TC (Works) No. 5/2005	- Pollution control regulations - EM&A

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		condition within and to prevent pollutants running into the downstream waters <ul style="list-style-type: none"> <li>Depending on the site conditions, physical barriers or temporary drainage would be established to intercept and divert the upstream flow</li> <li>Dewatering of the construction works area shall be conducted prior to the construction works. Silt removal facilities should be adopted to treat the wastewater from dewatering operations prior to discharge. Details of the containment structures, flow diversion pathway and water treatment method should be provided by the Contractor to the Engineer for approval before commencement of construction works for the Project. After completion of the construction works, the works area shall be cleaned up before receiving any water flow or connecting to any existing watercourse.</li> <li>All excavated materials generated from construction works in watercourses and wet areas should be collected and handled in compliance with the WDO. No direct disposal of the construction wastes or excavated materials into the stormwater drainage system and inland water should be allowed.</li> <li>The precautionary measures in Appendix D of ETWB TC No. 5/2005 shall be applied and pollution control measures for construction works in close proximity to inland water and mitigation measures for general construction activities should also be implemented.</li> </ul>								
5.8.1.19 – 5.8.1.20	4.2	<u>Sewage from Construction Workforce</u> <ul style="list-style-type: none"> <li>No discharge of sewage to the stormwater drains and inland water will be allowed.</li> <li>Adequate and sufficient portable chemical toilets should be provided in the works areas to handle sewage from construction workforce. A licensed collector should be employed to clean and maintain the</li> </ul>	To avoid water quality impact from sewage effluent from construction workforce	All construction sites / construction phase / upon completion of all construction activities	Contractor		✓		- WPCO - EIAO-TM - ProPECC PN 1/94	- Pollution control regulations - EM&A

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						Des	C	O		
		chemical toilets on a regular basis. <ul style="list-style-type: none"> <li>Notices should be posted at conspicuous locations to remind the workers not to discharge any sewage or wastewater into the surrounding environment</li> </ul>								
5.8.1.21 – 5.8.1.23	4.2	<u>Accidental Spillage of Chemicals</u> <ul style="list-style-type: none"> <li>Contractor must register as a chemical waste producer if chemical wastes would be produced from the construction activities. The Waste Disposal Ordinance (Cap 354) and its subsidiary regulations in particular the Waste Disposal (Chemical Waste) (General) Regulation, should be observed and complied with for control of chemical wastes.</li> <li>The Contractor is also recommended to develop management procedures for chemicals used and prepare an emergency spillage handling procedure to deal with chemical spillage in case of accident occurs.</li> <li>Any service shop and maintenance facilities should be located on hard standings within a bunded area, and sumps and oil interceptors should be provided. Maintenance of vehicles and equipment involving activities with potential for leakage and spillage should only be undertaken within the areas appropriately equipped to control these discharges.</li> <li>Disposal of chemical wastes should be carried out in compliance with the WDO and requirements in its subsidiary Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes.</li> </ul>	To avoid water quality impact from accidental spillage of chemicals	All construction sites / construction phase / upon completion of all construction activities	Contractor		✓		<ul style="list-style-type: none"> <li>WPCO</li> <li>EIAO-TM</li> <li>WDO</li> </ul>	<ul style="list-style-type: none"> <li>Pollution control regulations</li> <li>EM&amp;A</li> </ul>
Mitigation Measures for Operational Phase Water Quality Impacts										
5.8.2.1 – 5.8.2.5	4.2	<u>Surface Run-off</u> Follow the guidelines in ProPECC PN 5/93 “ <b>Drainage Plans</b> subject to Comments by Environmental Protection <b>Department</b> ” in <b>design of site drainage:</b> <i>Design Measures</i> <ul style="list-style-type: none"> <li>Exposed surface shall be avoided within the Site to</li> </ul>	Avoid or minimise water quality impact from surface run-off	Design phase	Project Proponent / Contractor	✓		✓	<ul style="list-style-type: none"> <li>EIAO-TM</li> <li>WPCO</li> <li>TM-DSS</li> <li>ProPECC PN 5/93</li> </ul>	<ul style="list-style-type: none"> <li>Pollution control and other regulations</li> </ul>

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		minimise soil erosion. The Site shall be either hard paved or covered by landscaping area and plantation where appropriate. <ul style="list-style-type: none"> <li>The drainage system within the Site should be designed to cater for the runoff from 50 year-return-period rainstorm.</li> </ul> <i>Devices / Facilities to Control Pollution</i> <ul style="list-style-type: none"> <li>Screening facilities such as standard gully grating and trash grille, with spacing which is capable of screening large substances such as fallen leaves and rubbish should be provided at the inlet of drainage system.</li> <li>Road gullies with standard design and silt traps and oil interceptors should be incorporated during the detailed design to remove particles present in stormwater runoff.</li> </ul>								

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**Table B.4 Implementation Schedule of the Proposed Mitigation Measures for Waste Management Implications**

EIA Ref.	EM&A Manual Ref.	Environmental Protection Measures	Objectives of the Measures	Location / Duration of Measures/ Timing of Completion of Measures	Implementation Agent	Implementation Stages**			Relevant Legislation and Guidelines	Tools/ Mechanism for Implementation
						Des	C	O		
6.5.1.3	5.2	<p>Implement the following good site practices on waste management:</p> <ul style="list-style-type: none"> <li>Nomination of approved personnel, such as a site manager, to be responsible for implementation of good site practices, arrangements for waste collection and effective disposal to an appropriate facility;</li> <li>Training of site personnel in site cleanliness, concepts of waste reduction, reuse and recycling, proper waste management and chemical waste handling procedures;</li> <li>Provision of sufficient waste reception / disposal points, and regular collection of waste;</li> <li>Adoption of appropriate measures to minimise windblown litter and dust during transportation of waste by either covering trucks or by transporting wastes in enclosed containers;</li> <li>Provision of regular cleaning and maintenance programme for drainage systems, sumps and oil interceptors;</li> <li>Adoption of a recording system for the amount of wastes generated, recycled and disposed (including the disposal sites); and</li> <li>Preparation of Waste Management Plan (WMP), as part of the Environmental Management Plan (EMP) for submission to the Architect/Engineer for approval.</li> </ul>	To ensure proper waste management	All construction sites / Construction Phase / upon completion of all construction activities	Contractor		✓		<ul style="list-style-type: none"> <li>Waste Disposal Ordinance (WDO)</li> <li>ETWB TC(W) No. 19/2005</li> <li>Waste Disposal (Chemical Waste) (General) Regulation</li> <li>Project Administration Handbook (PAH) for Civil Engineering Works, Section 4.1.3 of Chapter 4</li> </ul>	<ul style="list-style-type: none"> <li>Pollution control regulations</li> <li>EM&amp;A</li> </ul>
6.5.1.4	5.2	<p><u>Waste Reduction Measures</u></p> <ul style="list-style-type: none"> <li>Segregate and store different types of construction related waste in different containers, skips or stockpiles to enhance reuse or recycling of materials and their proper disposal;</li> <li>Provide separate labelled bins to segregate recyclable waste such as aluminium cans from other general refuse generated by the work force, and to encourage collection by individual collectors;</li> </ul>	Good site practices to achieve avoidance / minimisation of waste generation	All construction sites / Construction Phase / upon completion of all construction activities	Contractor		✓		<ul style="list-style-type: none"> <li>WDO</li> </ul>	<ul style="list-style-type: none"> <li>Pollution control regulations</li> <li>EM&amp;A</li> </ul>

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		<ul style="list-style-type: none"> <li>Recycle any unused chemicals or those with remaining functional capacity;</li> <li>Maximise the use of reusable steel formwork to reduce the amount of C&amp;D materials;</li> <li>Adopt proper storage and site practices to minimise the potential for damage to, or contamination of construction materials;</li> <li>Plan the delivery and stock of construction materials carefully to minimise the amount of waste generated; and</li> <li>Minimise over ordering and wastage through careful planning during purchasing of construction materials.</li> </ul>								
6.5.1.6 – 6.5.1.7	5.2	<u>Reducing and Reuse of C&amp;D Materials</u> <ul style="list-style-type: none"> <li>Careful design, planning together with good site management to reduce over-ordering and generation of C&amp;D materials.</li> <li>Formwork should be designed to minimise the use of standard wooden panels, so that high reuse levels can be achieved. Alternatives such as steel formwork or plastic facing should be considered to increase the potential for reuse.</li> <li>Excavated inert materials with suitable characteristics / size should be reused on-site as fill material as far as practicable.</li> <li>Surplus inert C&amp;D materials would be transported and delivered to public filling area for beneficial reuse as filling material by other projects.</li> <li>Prior to disposal of non-inert C&amp;D materials, wood, steel and other metals should also be separated for reuse and / or recycle where practicable.</li> </ul>	Good site practices on reducing and reuse of C&D materials	All construction sites / Construction Phase / upon completion of all construction activities	Contractor		✓		<ul style="list-style-type: none"> <li>WDO</li> <li>ETWB TC(W) No. 19/2005</li> <li>Project Administration Handbook (PAH) for Civil Engineering Works, Section 4.1.3 of Chapter 4</li> </ul>	<ul style="list-style-type: none"> <li>Pollution control regulations</li> <li>EM&amp;A</li> </ul>
6.5.1.8	5.2	<u>Storage of C&amp;D Materials</u> Suitable areas should be designated within the works site boundaries for temporary stockpiling of C&D material. The temporary storage of C&D materials on-site should be	To ensure proper waste management to control	All construction sites / Construction Phase / upon completion of all construction activities	Contractor		✓		<ul style="list-style-type: none"> <li>WDO</li> <li>ETWB TC(W) No. 19/2005</li> </ul>	<ul style="list-style-type: none"> <li>Pollution control regulations</li> <li>EM&amp;A</li> </ul>

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		limited to no more than 1,000m <sup>3</sup> . Within stockpile areas, the following measures should be taken to control potential environmental impacts or nuisance: <ul style="list-style-type: none"> <li>cover material during heavy rainfall;</li> <li>locate stockpiles to minimise potential visual impacts;</li> <li>minimise land intake of stockpile areas as far as possible.</li> </ul>	associated environmental nuisance						- PAH for Civil Engineering Works, Section 4.1.3 of Chapter 4	
6.5.1.9	5.2	<u>Disposal of C&amp;D Materials</u> <ul style="list-style-type: none"> <li>A trip-ticket system and a recording system for the amount of waste generated, recycled and disposed, including the disposal sites, should also be set up to monitor the disposal of C&amp;D materials and to control fly-tipping.</li> <li>Warning signs should be put up to remind the designated disposal sites. CCTV should also be installed at the vehicular entrance and exit of the site as additional measures to prevent fly-tipping.</li> <li>When delivering inert C&amp;D materials at a public fill reception facility, the material shall not contain material considered to be unsuitable by the Filling Supervisor.</li> </ul>	To ensure proper waste management to control associated environmental nuisance	All construction sites and Transportation Route of Waste / Construction Phase / upon completion of all construction activities	Contractor		✓		- WDO - DEVB TC(W) No.06/2010 - Land (Miscellaneous Provisions) Ordinance (Cap. 28)	- Pollution control regulations - EM&A
6.5.1.10	5.2	<u>Chemical Wastes</u> <ul style="list-style-type: none"> <li>If chemical waste is produced at the construction site, the contractor would be required to register with the EPD as a Chemical Waste Producer.</li> <li>Good quality containers compatible with the chemical wastes should be used, and incompatible chemicals should be stored separately.</li> <li>Appropriate labels should be securely attached on each chemical waste container indicating the corresponding chemical characteristics of the chemical waste.</li> <li>The contractor shall use a licensed collector to transport and dispose of the chemical wastes at the CWTC or other licensed facility.</li> </ul>	To ensure proper waste management	All construction sites / Construction Phase / upon completion of all construction activities	Contractor		✓		- WDO - Waste Disposal (Chemical Waste) (General) Regulation - Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes	- Pollution control regulations EM&A

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EIA Ref.	EM&A Manual Ref.	Environmental Protection Measures	Objectives of the Measures	Location / Duration of Measures/ Timing of Completion of Measures	Implementation Agent	Implementation Stages**			Relevant Legislation and Guidelines	Tools/ Mechanism for Implementation
						Des	C	O		
6.4.1.11 & 6.5.1.11	5.2	<u>Chemical Waste – Asbestos</u> <ul style="list-style-type: none"> <li>Sufficient and reasonable lead time shall be allowed for preparation, vetting and implementation of Asbestos Investigation Report and Asbestos Abatement Plan in accordance with APCO before commencement of any demolition works of the suspected asbestos cement pipe in Fo Tan Nullah.</li> <li>The handling and disposal of ACM will be carried out <b>in accordance with the EPD's Code of Practice on Handling, Transportation and Disposal of Asbestos Waste and ProPECC PN 2/97 Handling of Asbestos Containing Materials in Buildings.</b></li> <li>The asbestos waste generated should be disposed of by a licensed chemical waste collector in compliance with the Waste Disposal Ordinance.</li> </ul>	To ensure proper waste management	Along low flow channel of Fo Tan Nullah / Construction Phase / upon demolition of suspected asbestos cement pipe	Project Proponent / Contractor	✓	✓		<ul style="list-style-type: none"> <li>APCO</li> <li>Code of Practice on Handling, Transportation and Disposal of Asbestos Waste</li> <li>ProPECC PN 2/97</li> <li>WDO</li> </ul>	<ul style="list-style-type: none"> <li>Pollution control regulations</li> <li>EM&amp;A</li> </ul>
6.5.1.12	5.2	<u>General Refuse</u> <ul style="list-style-type: none"> <li>General refuse should be stored in enclosed bins or compaction units separate from C&amp;D materials and chemical wastes.</li> <li>A reputable waste collector should be employed by the contractor to remove general refuse from the site on a regular basis for disposal of at designated landfill.</li> <li>Clearly labelled recycling bins should be provided on site.</li> <li>The contractor should carry out an education programme for workers in avoiding, reducing, reusing and recycling of materials generation. Posters and leaflets advising on the use of the bins should also be provided in the site as reminders. The recyclable waste materials should then be collected by reliable waste recycling agents on a regular basis.</li> </ul>	To ensure proper waste management to control associated environmental nuisance	All construction sites / Construction Phase / upon completion of all construction activities	Contractor		✓		<ul style="list-style-type: none"> <li>WDO</li> <li>Public Health and Municipal Services Ordinance (Cap.132)</li> </ul>	<ul style="list-style-type: none"> <li>Pollution control regulations</li> <li>EM&amp;A</li> </ul>
6.5.1.13 – 6.5.1.14	5.2	<u>Desilted Materials</u> <ul style="list-style-type: none"> <li>The desilted materials should be contained in watertight container on-site and be transported off-site</li> </ul>	To ensure proper waste management to	Construction site of Section 1 / Construction Phase /	Contractor		✓		<ul style="list-style-type: none"> <li>Air Pollution Control (Construction</li> </ul>	<ul style="list-style-type: none"> <li>Pollution control regulations</li> </ul>

\*\* Des – Design, C – Construction, and O – Operation

EIA Ref.	EM&A Manual Ref.	Environmental Protection Measures	Objectives of the Measures	Location / Duration of Measures/ Timing of Completion of Measures	Implementation Agent	Implementation Stages**			Relevant Legislation and Guidelines	Tools/ Mechanism for Implementation
						Des	C	O		
		by trucks for disposal of at strategic landfill. <ul style="list-style-type: none"> <li>The excavated silts shall be wetted during excavation / material handling and shall be properly covered when placed on trucks. Loading of the materials to the truck shall be controlled to avoid splashing and overflowing of the slurry to the surrounding water.</li> <li>Requirements of the Air Pollution Control (Construction Dust) Regulation and Water Pollution Control Ordinance (WPCO), where relevant, shall be adhered to during excavation, transportation and disposal of the desilted materials.</li> </ul>	control associated environmental nuisance	upon completion of all construction activities				Dust) Regulation - WDO - Public Health and Municipal Services Ordinance (Cap.132) - WPCO	- EM&A	

**Table B.5 Implementation Schedule of the Proposed Mitigation Measures for Land Contamination Issue**

EIA Ref.	EM&A Manual Ref.	Environmental Protection Measures	Objectives of the Measures	Location / Duration of Measures/ Timing of Completion of Measures	Implementation Agent	Implementation Stages**			Relevant Legislation and Guidelines	Tools/ Mechanism for Implementation
						De	C	O		
7.6	6.1.1.2	Since land contamination issue would not be anticipated, no mitigation measure is considered necessary for the Project.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

**Table B.6 Implementation Schedule of the Proposed Mitigation Measures for Sewerage and Sewage Treatment Implications**

EIA Ref.	EM&A Manual Ref.	Environmental Protection Measures	Objectives of the Measures	Location / Duration of Measures/ Timing of Completion of Measures	Implementation Agent	Implementation Stages**			Relevant Legislation and Guidelines	Tools/ Mechanism for Implementation
						De	C	O		
8.4	7.2.1.1	Since no adverse impacts on sewerage and sewage treatment would be anticipated, no mitigation measure is considered necessary for the Project.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

\*\* Des – Design, C – Construction, and O – Operation

**Table B.7 Implementation Schedule of the Proposed Mitigation Measures for Ecological Impact**

EIA Ref.	EM&A Manual Ref.	Environmental Protection Measures	Objectives of the Measures	Location / Duration of Measures/ Timing of Completion of Measures	Implementation Agent	Implementation Stages**			Relevant Legislation and Guidelines	Tools/ Mechanism for Implementation
						Des	C	O		
Mitigation Measures for Construction Phase Ecological Impacts										
9.8.2.1	8.2	Avoid works within natural watercourse located directly upstream of the concrete nullah at Section 6 of FTN.	To avoid direct impacts on natural watercourse	Design and Construction Phase	Project Proponent / Contractor	✓	✓		N/A	- EM&A
9.8.2.2	8.2	Retain existing mature trees along FTN on pedestrian road within the Project site.	To protect mature vegetation along the nullah	Design and Construction Phase	Project Proponent / Contractor	✓	✓		N/A	- EM&A
9.8.3.1	8.2	<u>Careful Phasing of Construction Activities</u> The Project site will be divided into six sections to be constructed in sequence starting from downstream FTN and will not be undertaken at the entire section at the same time to reduce the construction impacts on nearby sensitive receivers comparing with constructing simultaneously in adjoining sections. All works within the nullah would be undertaken during dry season while works outside the nullah (such as walkway improvement) would be scheduled to avoid overlapping with works within the nullah to avoid heavy construction activities concentrating in a certain area over any period.	To minimise construction disturbances to surrounding habitats and associated wildlife	All construction sites / Construction Phase / upon completion of all construction activities	Contractor	✓	✓		N/A	- EM&A
9.8.3.2	8.2	Good site practices and the practices outlined in ETWB TC (Works) No. 5/2005 should be adopted to minimise the potential disturbances impacts from indirect water quality impacts on the species of conservation importance – freshwater crab <i>Somaniathelphusa zanklon</i> – recorded in Section 1 from construction works in proximity to watercourse, e.g. sandbags / approximate temporary partition should be provided to separate the works area and watercourse.	Good site practices to minimise disturbance to the species of conservation importance – freshwater crab <i>Somaniathelphusa zanklon</i>	Construction site of Section 1 / Construction Phase / upon completion of all construction activities	Contractor		✓		- ETWB TC (Works) No. 5/2005	- EM&A
9.8.3.3	8.2	Good site practices on air quality and noise control to further minimise construction disturbances to surrounding	To minimise construction	Construction Phase	Contractor		✓		- EIAO-TM	- EM&A

\*\* Des – Design, C – Construction, and O – Operation



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EIA Ref.	EM&A Manual Ref.	Environmental Protection Measures	Objectives of the Measures	Location / Duration of Measures/ Timing of Completion of Measures	Implementation Agent	Implementation Stages**			Relevant Legislation and Guidelines	Tools/ Mechanism for Implementation
						Des	C	O		
		habitats and associated wildlife.	disturbances to surrounding habitats and associated wildlife							
9.8.3.6	8.2	<u>Minimising Impacts on Hydrodynamics Properties</u> Design of ecological-friendly riverbed lining should be considered with reference to DSD PN No. 1/2015 <b>“Guidelines on Environmental and Ecological Considerations for River Channel Design”</b> .	To minimise impact on hydrological properties of watercourse habitat	Design / Construction Phase	Contractor	✓	✓		- DSD PN No. 1/2015	- EM&A
9.8.3.7	8.2	<u>Minimising Impacts on Water Quality during Construction Phase</u> Precautionary / pollution control measures and good site practices for construction works in close proximity and within as detailed in Table 14.3.	To prevent pollution of waterbodies and to minimise indirect water quality impacts on ecology	All construction sites / Construction Phase / upon completion of all construction activities	Contractor	✓	✓		- EIAO-TM - ProPECC PN 1/94 - ETWB TC (Works) No. 5/2005 - WPCO - TM-DSS	- Pollution control regulations - EM&A
Mitigation Measures for Construction and Operational Phase Ecological Impacts										
9.8.3.9	8.2	Lighting along FTN under the revitalisation plan should be minimised or incorporate wildlife-friendly lighting to avoid light spill. Intensity of light should be controlled to the lowest level possible and long wavelength lights such as amber lamps, which is visible to human but invisible to most animals, are recommended. The lights should be installed with a shield and at level as close to the ground as possible to prevent extensive light casting up into the sky. Lights with motion sensors can also be considered to further minimise disturbance to surrounding habitats as lights that are not in use would be automatically turn off.	To minimise disturbance to surrounding habitats and associated wildlife	Design, Construction & Operation Phase	Project Proponent / Contractor	✓	✓	✓	- Charter of External Lighting issued by ENB - Guidelines on Industry Best Practices for External Lighting Installations issued by ENB	- EM&A

\*\* Des – Design, C – Construction, and O – Operation

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EIA Ref.	EM&A Manual Ref.	Environmental Protection Measures	Objectives of the Measures	Location / Duration of Measures/ Timing of Completion of Measures	Implementation Agent	Implementation Stages**			Relevant Legislation and Guidelines	Tools/ Mechanism for Implementation
						Des	C	O		
<i>Mitigation Measures for Operational Phase Ecological Impacts (to be provided and established during the construction phase)</i>										
9.8.3.8	8.2	Design of site drainage and Best Management Practices (BMPs) for storm water discharge should follow the relevant guidelines and practices as given in the ProPECC PN 5/93 to minimise surface runoff from the Project.	To prevent / minimise the indirect water quality impacts from surface runoff on ecology	Design phase	Project Proponent / Contractor	✓	✓	✓	- ProPECC PN 5/93	- EM&A

\*\* Des – Design, C – Construction, and O – Operation

**Table B.8 Implementation Schedule of the Proposed Mitigation Measures for Fisheries Impact**

EIA Ref.	EM&A Manual Ref.	Environmental Protection Measures	Objectives of the Measures	Location / Duration of Measures/ Timing of Completion of Measures	Implementation Agent	Implementation Stages**			Relevant Legislation and Guidelines	Tools/ Mechanism for Implementation
						Des	C	O		
Construction Phase										
10.6.2	9.2	Since no adverse impacts on fisheries would be anticipated, no specific fisheries mitigation measure is considered necessary for the Project. Nonetheless, water pollution control measures (Table B.3 refers) should be strictly followed as these measures also serve to further protect fisheries resources.	N/A (Measures are under water quality section)	N/A	N/A	N/A	N/A	N/A	N/A	N/A

**Table B.9 Implementation Schedule of the Proposed Mitigation Measures for Cultural Heritage Impact**

EIA Ref.	EM&A Manual Ref.	Environmental Protection Measures	Objectives of the Measures	Location / Duration of Measures/ Timing of Completion of Measures	Implementation Agent	Implementation Stages**			Relevant Legislation and Guidelines	Tools/ Mechanism for Implementation
						Des	C	O		
11.7	10.1.1.2	Since cultural heritage impact would not be anticipated, no mitigation measure is considered necessary for the Project.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

\*\* Des – Design, C – Construction, and O – Operation

**Table B.10 Implementation Schedule of the Proposed Mitigation Measures for Landscape and Visual Impact**

EIA Ref.	EM&A Manual Ref.	Environmental Protection Measures	Objectives of the Measures	Location / Duration of Measures/ Timing of Completion of Measures	Implementation Agent	Implementation Stages**			Relevant Legislation and Guidelines	Tools/ Mechanism for Implementation
						Des	C	O		
Mitigation Measures for Construction Phase Impacts										
Table 12.8	11.2.	<u>CM1 – Tree Preservation during Construction</u> All existing trees to be retained shall be carefully protected during construction. Tree protection works shall be in accordance with DEVB TC(W) No. 4/2020 – Tree Preservation and Tree Management Practice Note No. 1 – Tree Preservation during Construction.	To protect the existing trees to be retained	All active construction sites / construction phase / upon completion of all construction activities	DSD / LCSD / Contractor	✓	✓		- DEVB TCW No. 4/2020 and the latest Guidelines on Tree Preservation during Development issued by GLTM Section of DEVB	- EM&A
Table 12.8	11.2.	<u>CM2 – Erection of Decorative Screen Hoarding</u> Decorative Hoarding, which is compatible with the surrounding settings, shall be erected during construction to minimise the potential landscape and visual impacts due to the construction works and activities.	Proper site management / setting to minimise potential landscape and visual impacts	All active construction sites / construction phase / upon completion of all construction activities	DSD / Contractor		✓		- EIAO-TM	- EM&A
Table 12.8	11.2.	<u>CM3 – Control of Night-time Lighting Glare</u> Any lighting provision of the construction works at night shall be carefully control to prevent light overspill to the nearby VSRs and into the sky.	To minimise potential impact to nearby VSRs by proper site settings	All active construction sites / construction phase / upon completion of all construction activities	DSD / Contractor		✓		- Charter of External Lighting issued by ENB - Guidelines on Industry Best Practices for External Lighting Installations issued by ENB	- EM&A
Table 12.8	11.2.	<u>CM4 – Management of Construction Activities and Facilities</u> The facilities and activities at works sites and areas, which	Proper site management / setting to	All active construction sites / construction phase / upon	DSD / Contractor		✓		- EIAO-TM	- EM&A

\*\* Des – Design, C – Construction, and O – Operation

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EIA Ref.	EM&A Manual Ref.	Environmental Protection Measures	Objectives of the Measures	Location / Duration of Measures/ Timing of Completion of Measures	Implementation Agent	Implementation Stages**			Relevant Legislation and Guidelines	Tools/ Mechanism for Implementation
						Des	C	O		
		include site office, temporary storage areas, temporary works etc., shall be carefully managed and controlled on the height, deposition and arrangement to minimise any potential adverse landscape and visual impacts.	minimise potential landscape and visual impacts	completion of all construction activities						
Table 12.8	11.2.	<u>CM5 – Reinstatement of Temporarily Disturbed Landscape Areas</u> All hard and soft landscape areas disturbed temporarily during construction due to temporary excavations, temporary works sites and works areas shall be reinstated to equal or better quality, to the satisfaction of the relevant Government Departments.	To reinstate disturbed hard and soft landscape areas	All active construction sites / construction phase / upon completion of all construction activities	DSD / Contractor		✓		- EIAO-TM	- EM&A
Table 12.8	11.2.	<u>CM6 – Reinstatement of Temporarily Disturbed Watercourses</u> Temporarily disturbed watercourses shall be reinstated to the satisfaction of relevant Government Departments. Good site practices as described in ETWB TCW No. 5/2005 “ <b>Protection of natural streams/rivers from adverse impacts arising from construction works</b> ” shall also be adopted to avoid any pollution entering the watercourses nearby where applicable.	To reinstate disturbed watercourse	All active construction sites / construction phase / upon completion of all construction activities	DSD / Contractor		✓		- ETWB TCW No. 5/2005	- EM&A
Mitigation Measures for Operational Phase Impacts ( <i>to be provided and established during the construction phase</i> )										
Table 12.9	11.2.	<u>OM1 – Greening Enhancement along Channel Bed and Embankment</u> The existing concrete riverbed and embankment will be resurfaced by a layer of vegetation, which will enhance the aesthetic value of the nullah. The riverbed will be planted with various types of riparian and wetland plants, including emergent wetland planting (e.g. reed and other aquatic herbs), mangroves, climbing plants, tree and / or grasscrete (e.g. reed and other aquatic herbs) and mangroves; while the river embankment will be covered by various types of climbers or trailing plants along the parapet planters.	To enhance aesthetic value of FTN	Design, Construction and Operational Phases	DSD / Contractor  Long-term Maintenance Party: DSD	✓	✓	✓	- EIAO-TM	- EM&A

\*\* Des – Design, C – Construction, and O – Operation

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EIA Ref.	EM&A Manual Ref.	Environmental Protection Measures	Objectives of the Measures	Location / Duration of Measures/ Timing of Completion of Measures	Implementation Agent	Implementation Stages**			Relevant Legislation and Guidelines	Tools/ Mechanism for Implementation
						Des	C	O		
Table 12.9	11.2.	<u>OM2 – Provision of Recreational Opportunity along Nullah</u> The provision and improvement of recreational facilities including but not limited to sitting-out areas, thematic planting, play elements, viewing decks, other gathering points proposed improvement/modification of existing planters etc. along the nullah aim to enhance the ecological, landscape and visual value of the nullah, provide a greener environment, promote water friendliness and improve the community environment.	To enhance landscape and visual value of FTN	Design, Construction and Operational Phases	DSD / Contractor  Long-term Maintenance Party <sup>(1)</sup> : DSD / LCSD	✓	✓	✓	- EIAO-TM	- EM&A
Table 12.9	11.2.	<u>OM3 – Compensatory Tree Planting</u> Any trees to be felled under the Project shall be compensated in accordance with DEVB TC(W) No. 4/2020 - Tree Preservation. A Tree Preservation and Removal Proposal (TPRP) shall be prepared and submitted under the DEVB TC(W) No. 4/2020 by Contractor. The compensatory plantings shall be realistic, practicable and sustainable with a holistic consideration to balance the <b>quantity and quality of tree planting, and follow the “right tree for the right place” principles</b> . The proposed planting species shall be made reference to the Greening Master Plan issued by CEDD and the Street Tree Selection Guide issued by DEVB.	To compensate trees to be felled under the Project	Design, Construction and Operational Phases	DSD / Contractor  Long-term Maintenance Party <sup>(1)</sup> : DSD / LCSD	✓	✓	✓	- DEVB TC(W) No. 4/2020	- EM&A
Table 12.9	11.2.	<u>OM4 – Sensitive and Aesthetically Pleasing Design</u> Sensitive and aesthetically pleasing design as regard to the form, material and finishes shall be incorporated to the proposed above-ground structures e.g. pavilions, seating areas, viewing decks, railings along the nullah etc so as to minimise any potential adverse landscape and visual impact.	To enhance aesthetic value of the proposed aboveground structures	Design, Construction and Operational Phases	DSD / Contractor  Long-term Maintenance Party <sup>(1)</sup> : DSD / LCSD	✓	✓	✓	- EIAO-TM	N/A
Table 12.9	11.2.	<u>OM5 – Re-provision of Affected Open Space</u> To re-provide the affected open space of Kwei Tei Street Garden, that is temporarily closed during the construction phase of the Project due to the excavation works of the underground water storage tank, in better quality and design for the enjoyment of the local residents. Both soft	To reinstate disturbed hard and soft landscape areas	Design, Construction and Operational Phases	DSD / Contractor  Long-term Maintenance Party <sup>(1)</sup> : DSD / LCSD	✓	✓	✓	- EIAO-TM	- EM&A

\*\* Des – Design, C – Construction, and O – Operation

EIA Ref.	EM&A Manual Ref.	Environmental Protection Measures	Objectives of the Measures	Location / Duration of Measures/ Timing of Completion of Measures	Implementation Agent	Implementation Stages**			Relevant Legislation and Guidelines	Tools/ Mechanism for Implementation
						Des	C	O		
		and hard landscape proposals shall be provided for LCSD's agreement.								
Table 12.9	11.2.	<u>OM6 – Transplanting</u> According to latest tree treatment proposal, 15 nos. of trees that are unavoidably affected by proposed works are suggested to be transplanted where practical. A TPRP will be submitted to relevant government departments for approval in accordance with DEVB TC(W) Nos. 6/2015 and 4/2020 and Guidelines on Tree Transplanting by DEVB and final locations of transplanted trees should be agreed prior to commencement of the work.	To transplant trees which are affected by proposed works	Design, Construction and Operational Phases	DSD / Contractor  Long-term Maintenance Agent <sup>[1]</sup> : DSD / LCSD	✓	✓	✓	- DEVB TC(W) Nos. 6/2015 and 4/2020 - Guidelines on Tree Transplanting by DEVB	- EM&A

Note:

[1] In case of interface issues between DSD (Project Proponent) and LCSD facilities, the arrangement of long-term maintenance/management agencies are subject to agreement of with corresponding departments in accordance with DEVB TCW No. 6/2015.

\*\* Des – Design, C – Construction, and O – Operation