

# Appendix B

## Summary of Implementation Status of

### Environmental Mitigation

## Appendix B IMPLEMENTATION SCHEDULE OF THE PROPOSED MITIGATION MEASURES

**Table B.1 Implementation Schedule for Air Quality Mitigation Measures**

EIA Ref.	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*			Relevant Legislation and Guidelines
				Des	C	O	
S3.7.1.1	<p>Sufficient dust suppression measures as stipulated under the Air Pollution Control (Construction Dust) Regulation (Cap 311R) and good site practices should be properly implemented in order to minimise the construction dust generated. The measures include the followings:</p> <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 of particular dusty construction 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 should be applied to aggregate fines;</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 washing facilities at the exit point of the site;</li> <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 plant should be at the maximum possible distance from ASRs.</li> </ul>	Works sites / throughout the construction period	Contractor		√		<ul style="list-style-type: none"> <li>◆ Air Pollution Control (Amendment) Ordinance 2013 (APCO) (Cap 311)</li> <li>◆ Technical Memorandum on the Environmental Impact Assessment Process (EIAO-TM)</li> <li>◆ Air Pollution Control (Construction Dust) Regulation (Cap 311R)</li> <li>◆ Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation.</li> </ul>

EIA Ref.	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*			Relevant Legislation and Guidelines
				Des	C	O	
S3.7.1.2	<p>Guidelines stipulated in EPD's Recommended Pollution Control Clauses for Construction Contracts should also be incorporated in the contract documents to abate dust impacts. The clauses include:</p> <ul style="list-style-type: none"> <li>• The Contractor shall observe and comply with the Air Pollution Control Ordinance and its subsidiary regulations, particularly the Air Pollution Control (Open Burning) Regulation, Air Pollution Control (Construction Dust) Regulation and Air Pollution (Smoke) Regulation.</li> <li>• The Contractor shall undertake at all times to prevent dust nuisance and smoke 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, 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 require to submit the methods of working, plant, equipment and air pollution control system to be used on the site for the Engineer inspection and approval.</li> </ul>	Works sites / throughout the construction period	Contractor		√		◆ EPD's Recommended Pollution Control Clauses for Construction Contracts

EIA Ref.	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*			Relevant Legislation and Guidelines
				Des	C	O	
S3.7.3.1	Loading of the dredged sediment to the barge should be controlled to avoid splashing and overflowing of the sediment slurry to the surrounding water. Any dredged sediment should be stored in enclosed tanks or properly covered as far as practicable to minimise its exposed area during its temporary storage and should be placed as far away from the identified ASRs as practically possible. Dredging rate should be controlled carefully. The dredged sediment will be delivered off-site for disposal every day to avoid storing at the barge overnight. Dredged sediment placed on marine vessel for disposal should also be properly covered during transportation. Dredging activities should be conducted during non-summer season as far as possible.	Works sites / during dredging, handling of dredged materials	Contractor		√	√	<ul style="list-style-type: none"> <li>◆ APCO</li> <li>◆ EIAO-TM</li> <li>◆ Air Pollution Control (Construction Dust) Regulation (Cap 311R)</li> <li>◆ Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation.</li> </ul>

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

**Table B.2 Implementation Schedule for Noise Mitigation Measures**

EIA Ref.	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*			Relevant Legislation and Guidelines
				Des	C	O	
S4.8.1.3	<p>Good Site Practice</p> <ul style="list-style-type: none"> <li>• Only well-maintained plant should be operated on-site and plant should be serviced regularly during the construction program;</li> <li>• Silencers or mufflers on construction equipment should be utilised and should be properly maintained during the construction program;</li> <li>• Mobile plant, if any, should be sited as far 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; and</li> <li>• Plant known to emit noise strongly in one direction should, wherever possible, be orientated so that the noise is directed away from the nearby NSRs.</li> </ul>	Work sites /during construction stage	Contractor		√		<ul style="list-style-type: none"> <li>◆ Noise Control Ordinance (NCO)</li> <li>◆ EIAO-TM</li> <li>◆ Technical Memorandum on Noise from Construction Work other than Percussive Piling (GW-TM)</li> <li>◆ Recommended Pollution Control Clauses for Construction Contracts</li> </ul>
S4.8.1.4	The "Recommended Pollution Control Clauses for Construction Contracts" published by the EPD should be adopted in the Contract Specification for the Contractors to follow and implement relevant measures and good site practices in minimising noise impact.	Works sites / during construction stage	Contractor		√		Ditto

EIA Ref.	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*			Relevant Legislation and Guidelines
				Des	C	O	
S4.8.1.5, S4.8.1.6 & Table 4.5	<p>Quiet Powered Mechanical Equipment</p> <p>Use of quiet plant which should be made reference to the Powered Mechanical Equipment (PME) listed in the Technical Memorandum or the Quality Powered Mechanical Equipment (QPME) / other commonly used PME listed in Environmental Protection Department (EPD) web pages as far as possible which includes the Sound Power Level (SWLs) for specific quiet PME.</p>	Work sites /during construction stage	Contractor		√		Ditto
S4.8.1.7 & S4.8.1.8	<p>Noise Barriers and Noise Enclosure</p> <p>The Contractor will be responsible for design of the movable noise barrier with due consideration given to the size of the PME and the requirement of intercepting the line of sight between the NSRs and PME. The movable noise barrier should have a minimum surface density of 10 kg/m<sup>2</sup> and it should have no openings or gaps.</p> <p>Portable noise enclosure should be used, as far as practicable, to mitigate the noise impacts arising from the use of handheld breaker, air compressor, compactor (vibratory) and drill/grinder, hand-held electric at some work areas (i.e. works areas LP3, LP4, LP5 and ST) where locate very close to the NSRs.</p>	Work sites /during construction stage	Contractor		√		Ditto

EIA Ref.	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*			Relevant Legislation and Guidelines
				Des	C	O	
S4.8.1.10	The streetscape improvement works should not be carried out within 10 m from Jockey Club Lei Yue Mun Plus (LYMP) during the time when LYMP is used for any noise sensitive purposes, such as holding courses or workshops. In addition, the beautification works at work areas LP1 should not be conducted during examination period. The Contractor should liaise with the operator of LYMP to obtain the updated schedule of courses, workshops and examination at the time of conducting the relevant construction works.	Work sites /during construction stage	Contractor		√		Ditto
S4.8.2.6	<p>Since conducting sewerage construction works and streetscape improvement works may involve repeated construction works at the same location, the ArchSD would closely liaise with DSD and their contractors in planning the interfacing works to minimise duplicated/concurrent construction works, including exploring the possibility of entrusting the streetscape improvement works to DSD, so as to minimise nuisance to nearby sensitive receivers such as residents, shops, restaurants and educational institution as far as practicable.</p> <p>Before commencing noisy construction works, such as road breaking works, in the vicinity of the NSRs, the Contractor would closely liaise with the affected NSRs to keep them informed of the works and should strive to complete the works in the shortest time possible. To minimise nuisance to nearby educational institution and seafood restaurants, noisy construction works would not</p>	Work sites / during construction stage	Project Proponent / Contractor		√		Ditto

EIA Ref.	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*			Relevant Legislation and Guidelines
				Des	C	O	
	be carried out during the examination period of the educational institution and the peak business hour of the restaurant.						

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



**Table B.3 Implementation Schedule for Water Quality Mitigation Measures**

EIA Ref.	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*			Relevant Legislation and Guidelines
				Des	C	O	
S5.7.1.1 & S5.7.2.13	The dredging operation would be properly scheduled such that no dredging works will be carried out during the period of the Annual Cross Harbour Swim Race to be held.	Works sites / during dredging in construction and operation stages	Contractor for dredging		√	√	N/A
S5.8.1.1	<p><i>Good Site Practices for Dredging</i></p> <ul style="list-style-type: none"> <li>All vessels should be sized so that adequate clearance is maintained between vessels and the seabed in all tide conditions, to ensure that undue turbidity is not generated by turbulence from vessels movement or propeller wash;</li> <li>All barges / dredgers should be fitted with tight fitting seals to their bottom openings to prevent leakage of material;</li> <li>Excess material shall be cleaned from the decks and exposed fittings of barges and hopper dredgers before the vessel is moved;</li> <li>Construction activities should not cause foam, oil, grease, scum, litter or other objectionable matter to be present on the water within the site or dumping grounds;</li> <li>Construction activities should not be filled to a level that will cause the overflow of materials or polluted water during loading or transportation.</li> </ul>	Works sites / during dredging in construction and operation stages	Contractor for Dredging		√	√	<ul style="list-style-type: none"> <li>◆ EIAO-TM</li> <li>◆ EIAO</li> <li>◆ WPCO</li> <li>◆ Waste Disposal Ordinance (WDO)</li> <li>◆ Technical Memorandum on Standards for Effluents Discharged into Drainage and Sewerage Systems, Inland and Coastal Waters (TM-DSS)</li> </ul>

EIA Ref.	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*			Relevant Legislation and Guidelines
				Des	C	O	
S5.8.1.2	Only one closed grab should be used any time for the dredging works during both capital and maintenance dredging to minimise release of sediment and other contaminants.	Works sites / during dredging in construction and operation stages	Contractor for dredging		√	√	<ul style="list-style-type: none"> <li>◆ Technical Memorandum on the Environmental Impact Assessment Process (EIAO-TM)</li> <li>◆ Water Pollution Control Ordinance (WPCO)</li> </ul>
S5.8.1.2	The dredging rate shall not exceed 100 m <sup>3</sup> per hour with a maximum working period of 12 hours per day throughout the construction phase and operation phase.	Works sites / during dredging in the construction and operation stages	Contractor for dredging		√	√	<ul style="list-style-type: none"> <li>◆ EIAO-TM</li> <li>◆ WPCO</li> </ul>
S5.8.1.3	Silt curtains should be deployed enclosing the dredging, filling operation and seawall modification works. Under Section 10.6.31 of the Contaminated Spoil Management Study Final Report, silt curtains are defined as screens that extend over the full water depth in the dredging area to confine most of the suspended sediments. This is equivalent to the silt curtains to be adopted for the dredging, filling and seawall modification works in LYM waterfront, which involve the use of impervious sheets or filter fabrics extending over the full water depth. Regular inspection on the silt curtain condition by the contractor should be carried out to ensure the silt curtains are deployed properly and to maintain the performance of the silt curtains throughout the construction period.	Works sites / during dredging, filling operation and seawall modification in construction stage and maintenance dredging in operation stage	Contractor for dredging and seawall modification works		√	√	<ul style="list-style-type: none"> <li>◆ EIAO-TM</li> <li>◆ WPCO</li> </ul>

EIA Ref.	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*			Relevant Legislation and Guidelines
				Des	C	O	
S5.8.1.5	Seawall modification works should be undertaken during low tide, when the water level is low.	Lookout point 1, 5 and viewing platform / during construction stage	Contractor for seawall modification works		√		<ul style="list-style-type: none"> <li>◆ EIAO-TM</li> <li>◆ WPCO</li> </ul>
S5.8.2.1 – S5.8.2.2	<p>Control of potential water quality impact arising from the general construction works shall be achieved based on the following principles:</p> <ul style="list-style-type: none"> <li>• Minimisation of surface run-off;</li> <li>• Prevention or minimisation of the likelihood of the identified pollutants being in contact with rain or run-off or adjacent marine waters; and</li> <li>• Measures to abate pollutants at source.</li> </ul> <p>The Contractor shall apply for a discharge license under the WPCO and the discharge shall comply with the terms and conditions of the license. The Contractor shall also devise an Emergency Contingency Plan for accidental leakage or spillage of chemicals during construction phase and maintenance dredging. It should detail the communication line between Contractor, relevant government and stakeholders, remediation plan for containing and cleaning of leakage, evaluation and improvement work and determine follow-up action, such as monitoring.</p>	Works sites / during construction stage and maintenance dredging in operation stage	Contractor		√	√	<ul style="list-style-type: none"> <li>◆ EIAO-TM</li> <li>◆ WPCO</li> </ul>
S5.8.2.3	<p><i>Site Runoff and General Activities</i></p> <ul style="list-style-type: none"> <li>• High loading of SS in site run-off should be prevented through proper site management by the contractor;</li> <li>• Sand and silt removal facilities, channels and manholes should be maintained and the deposited silt and grit should be removed regularly by the</li> </ul>	All works sites / during construction stage	Contractor		√		<ul style="list-style-type: none"> <li>◆ ProPECCPN 1/94 Construction Site Drainage</li> <li>◆ WPCO</li> </ul>

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				Des	C	O	
	<p>contractor, and at the onset of and after each rainstorm to ensure that these facilities are functioning properly;</p> <ul style="list-style-type: none"> <li>• The drilling operation can be fully controlled by the workers, the volume of sediment laden water and the material stockpiled in the temporary storage steel tank can be anticipated such that spillage can be prevented. The tank should be kept within the temporary working platform with surrounding concrete bund walls. The tanks should be removed to other site area located far away from the river immediately after filling up and within the same day;</li> <li>• Stockpiles should be located away from any watercourses and the seafront;</li> <li>• Plant workshop / maintenance areas should be bunded on a hard standing. Sediment traps and oil interceptors should be provided at appropriate locations;</li> <li>• Works should be programmed to minimise soil excavation works where practicable during the rainy days;</li> <li>• Vehicle wheel washing facilities should be provided at the site exit such that mud, debris, etc. attached to the vehicle wheels or body can be washed off before the vehicle leaves the work site;</li> <li>• Section of the road between the wheel washing bay and the public road will be paved to reduce vehicle tracking of soil and to prevent site run-off from entering public road drains; and</li> <li>• Sufficient chemical toilets should be provided in the works areas in the proximity of the riverside for the sewage generated by the workforce. A licensed waste collector should be deployed to clean the</li> </ul>						

EIA Ref.	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*			Relevant Legislation and Guidelines
				Des	C	O	
	chemical toilets on a regular basis. Any sewage or wastewater discharge into the surrounding environment should not be allowed. Any chemical toilets should be located away from the river.						
S5.8.3.2 & S5.8.3.3	<p><i>Design Measures</i></p> <ul style="list-style-type: none"> <li>Exposed surface shall be avoided within the proposed development to minimise soil erosion. Development site shall be either hard paved or covered by landscaping area where appropriate to reduce soil erosion.</li> <li>The existing marine water in adjacent to the Project sites will be retained to maintain the original flow path. The drainage system will be designed to avoid any case of flooding based on the 1 in 50 year return period.</li> </ul>	Works sites / during operation stage	Project Proponent / Operator	√		√	<ul style="list-style-type: none"> <li>◆ EIAO-TM</li> <li>◆ WPCO</li> <li>◆ WDO</li> </ul>
S5.8.3.4 to S5.8.3.6	<p><i>Devices / Facilities to Control Pollution</i></p> <ul style="list-style-type: none"> <li>Screening facilities such as standard gully grating and trash grille, with spacing which is capable of screening off 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 storm water runoff.</li> <li>Subject to detailed design, standard manholes with desilting opening / sand trap designed for first flush flow (capable of providing at least 5 minutes' detention time) can be provided at final discharge point before discharge into the existing watercourse.</li> </ul>	Works sites/ during operation stage	Project Proponent / Operator	√		√	<ul style="list-style-type: none"> <li>◆ EIAO-TM</li> <li>◆ WPCO</li> <li>◆ WDO</li> </ul>

EIA Ref.	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*			Relevant Legislation and Guidelines
				Des	C	O	
	The feasibility of alternative measure such as Vortex grit separator would also be considered during the detailed design stage.						
S5.8.3.7 to S5.8.3.8	<p><i>Administrative Measures</i></p> <ul style="list-style-type: none"> <li>• Good management measures such as regular cleaning and sweeping of road surface / open areas is suggested. The road surface / open area cleaning should also be carried out prior to occurrence of rainstorm.</li> <li>• Manholes, as well as storm water gullies, ditches provided among the development areas should be regularly inspected and cleaned (e.g. monthly). Additional inspection and cleansing should be carried out before forecast heavy rainfall.</li> </ul>	Works sites/ during operation stage	The Operator			√	<ul style="list-style-type: none"> <li>◆ EIAO-TM</li> <li>◆ WPCO</li> </ul>

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

**Table B.4 Implementation Schedule for Sewerage and Sewage Mitigation Measures**

EIA Ref.	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*			Relevant Legislation and Guidelines
				Des	C	O	
6.5.1.6	The Project Proponent should closely coordinate with DSD in monitoring the programme and liaise with DSD to formulate mitigation measures including but not limit to installation of chemical toilets near the restaurants to cater for the additional sewage arising from the increased tourist after commencement of the Lei Yue Mun Waterfront Enhancement project and before the commissioning of the proposed sewerage works under DSD project should any programme gap is identified in the future.	Works sites/ During operation stage	Project Proponent / Operator			√	◆ EIAO-TM

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

**Table B.5 Implementation Schedule for Waste Management Measures**

EIA Ref.	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*			Relevant Legislation and Guidelines
				Des	C	O	
S7.7.2.1 – S7.7.2.2	<p><i>Waste Management Hierarchy</i></p> <p>The waste management hierarchy should be applied:</p> <ul style="list-style-type: none"> <li>• Avoidance and minimisation of waste generation;</li> <li>• Reuse of materials as far as practicable;</li> <li>• Recovery and recycling of residual materials where possible; and</li> <li>• Treatment and disposal of waste according to relevant laws, guidelines and good practices</li> </ul> <p>Recommendations of good site practices and waste reduction measures should be stated in order to achieve avoidance and minimisation of waste generation in the waste management hierarchy. An Environmental Management Plan (EMP) and trip-ticket system are recommended for monitoring management of waste. Specific measures targeting the mitigation of impacts in works areas and the transportation of waste off-site should be provided to minimise the potential impacts to the surrounding environment.</p>	Works sites/ during design and construction stages	Project Proponent/ Contractor	√	√		<ul style="list-style-type: none"> <li>◆ EIAO-TM</li> <li>◆ ETWB TCW No. 19/2005</li> </ul>
S7.7.3.1	<p><i>Good Site Practices</i></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 wastes handling procedures.</li> </ul>	Works sites/ during design and construction stages	Project Proponent/ Contractor	√	√		<ul style="list-style-type: none"> <li>◆ EIAO-TM</li> <li>◆ ETWB TCW No. 19/2005</li> </ul>



EIA Ref.	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*			Relevant Legislation and Guidelines
				Des	C	O	
	<ul style="list-style-type: none"> <li>Provision of sufficient waste disposal points and regular collection for disposal.</li> <li>Adoption of appropriate measures to minimise windblown litter and dust during handling, transportation and disposal of waste.</li> <li>Preparation of a WMP in accordance with the ETWB TCW No. 19/2005 Environmental Management on Construction Sites and submitted it to the Engineer for approval.</li> </ul>						
S7.7.4.1	<p><i>Waste Reduction Measures</i></p> <ul style="list-style-type: none"> <li>Segregate and store different types of waste in different containers, skips or stockpiles to enhance reuse or recycling of materials and their proper disposal.</li> <li>Adopt proper storage and site practices to minimise the potential for damage to, and contamination of, construction materials.</li> <li>Plan the delivery and stock of construction materials carefully to minimise the amount of waste generated;</li> <li>Sort out demolition debris and excavated materials from demolition works to recover reusable / recyclable portions (i.e. soil, rock, broken concrete, etc.).</li> <li>Maximise the use of reusable steel formwork to reduce the amount of C&amp;D materials.</li> <li>Minimise over ordering of concrete, mortars and cement grout by doing careful check before ordering.</li> <li>Adopt pre-cast construction method instead of cast-in-situ method for construction of concrete structure as far as possible.</li> </ul>	Works sites / during design and construction stages	Project Proponent/ Contractor	√	√		<ul style="list-style-type: none"> <li>◆ EIAO-TM</li> <li>◆ WDO</li> </ul>

EIA Ref.	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*			Relevant Legislation and Guidelines
				Des	C	O	
S7.7.5.1 – 7.7.5.2	<p><i>Storage, Collection and Transportation of Waste</i></p> <ul style="list-style-type: none"> <li>• Waste, such as soil, should be handled and stored well to ensure secure containment, thus minimising the potential of pollution;</li> <li>• Maintain and clean storage areas routinely;</li> <li>• Stockpiling area should be provided with covers and water spraying system to prevent materials from being wind-blown or washed away; and</li> <li>• Different locations should be designated to stockpile each materials to enhance reuse.</li> <li>• Waste hauler with appropriate permits should be employed by the Contractor for the collection and transportation of waste from works areas to respective disposal outlets. The following recommendation should be implemented to minimise the impacts:                             <ul style="list-style-type: none"> <li>– Remove waste in timely manner.</li> <li>– Employ the trucks with cover or enclosed containers for waste transportation.</li> <li>– Obtain relevant waste disposal permits from the appropriate authorities.</li> <li>– Dispose of waste at licensed waste disposal facilities.</li> </ul> </li> </ul>	Works sites / during construction stage	Contractor		√		<ul style="list-style-type: none"> <li>◆ EIAO-TM</li> <li>◆ WDO</li> </ul>

EIA Ref.	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*			Relevant Legislation and Guidelines
				Des	C	O	
S7.7.6.1 – 7.7.6.10 & S7.7.13.1	<p><i>Dredged Marine Sediments</i></p> <ul style="list-style-type: none"> <li>The sediment should be dredged, handled, transported and disposed of in a manner that would minimise adverse environmental impacts.</li> <li>Requirements of the Air Pollution Ordinance (Construction Dust) Regulation, where relevant, shall be adhered to during dredging, transportation and disposal of the sediment.</li> <li>To minimise the exposure to contaminated materials, workers shall, if necessary, wear appropriate personal protective equipment (PPE) when handling contaminated sediments. Adequate washing and cleaning facilities shall also be provided on site.</li> <li>For off-site disposal, the basic requirements and procedures specified under ETWB TCW No. 34/2002 shall be followed. The rationale for sediment removal/disposal should be submitted to MFC/CEDD for agreement.</li> </ul> <p>For site allocation and application of marine dumping permit, separate Sediment Sampling and Testing Plan (SSTP) may need to be submitted to EPD for agreement under the Dumping at Sea Ordinance (DASO). Additional SI works, based on the SSTP, may need to be carried out in order to confirm the disposal arrangements of the dredged sediment. A Sediment Quality Report (SQR), reporting the chemical and biological screening results and the estimated quantities of sediment under different disposal options, may then need to be submitted to EPD for agreement under DASO.</p>	Works sites / during dredging, handling, transportation and disposal of sediment in construction stage and maintenance dredging in operation stages	Project Proponent / Contractor		√	√	<ul style="list-style-type: none"> <li>◆ DASO</li> <li>◆ ETWB TCW No. 34/2002</li> <li>◆ APCO</li> <li>◆ WPCO</li> </ul>

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	<ul style="list-style-type: none"> <li>To ensure disposal space is allocated for the Project, the Project Proponent should be responsible for obtaining agreement from MFC on the allocation of the disposal site. The contractor(s), on the other hand, should be responsible for the application of the marine dumping permit under DASO from EPD for the sediment disposal.</li> <li>The dredged sediments are expected to be loaded onto the barge and transported to the designated disposal sites allocated by MFC. The dredged sediment would be disposed of according to its determined disposal options and ETWB TCW No. 34/2002.</li> <li>Stockpiling of contaminated sediments should be avoided as far as possible. If temporary stockpiling of contaminated sediments is necessary, the dredged sediment should be covered by tarpaulin and the area should be placed within earth bunds or sand bags to prevent leachate from entering the ground, nearby drains and surrounding water bodies. The stockpiling areas should be completely paved or covered by linings in order to avoid contamination to underlying soil or groundwater. Separate and clearly defined areas should be provided for stockpiling of contaminated and uncontaminated materials. Leachate, if any, should be collected and discharged according to the Water Pollution Control Ordinance (WPCO).</li> </ul>						

EIA Ref.	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*			Relevant Legislation and Guidelines
				Des	C	O	
	<ul style="list-style-type: none"> <li>In order to minimise the potential odour / dust emissions during dredging and transportation of the sediment, the dredged sediments shall be wetted during dredging / material handling and shall be properly covered when placed on trucks or barges. Loading of the dredged sediment to the barge shall be controlled to avoid splashing and overflowing of the sediment slurry to the surrounding water.</li> <li>The barge transporting the sediments to the designated disposal sites shall be equipped with tight fitting seals to prevent leakage and shall not be filled to a level that would cause overflow of materials or laden water during loading or transportation. In addition, monitoring of the barge loading shall be conducted to ensure that loss of material does not take place during transportation. Transport barges or vessels shall be equipped with automatic self-monitoring devices as specified under DASO authority.</li> </ul>						
S7.7.7.1 – 7.7.7.4	<p><i>Construction and Demolition (C&amp;D) Materials</i></p> <ul style="list-style-type: none"> <li>Implement a trip-ticket system to monitor and document the disposal of C&amp;D waste</li> <li>C&amp;D materials generated from dredging, lookout points excavation works, and landing facility and carp-shaped platform construction works should be segregated from other waste to avoid contamination and ensure acceptability at the public fill reception facilities or reclamation sites.</li> <li>C&amp;D materials should be sorted on-site into inert and non-inert materials.</li> </ul>	Works sites / during construction stage	Contractor		√		<ul style="list-style-type: none"> <li>◆ WDO</li> <li>◆ DEVB TCW No. 06/2010</li> <li>◆ ETWB TCW 33/2002</li> <li>◆ ETWB TCW 19/2005</li> </ul>

EIA Ref.	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*			Relevant Legislation and Guidelines
				Des	C	O	
	<ul style="list-style-type: none"> <li>• Non-inert C&amp;D waste, such as wood, plastic, steel and other metals should be reused or recycled and, as a last resort, disposed to landfill.</li> <li>• A suitable area should be designated within the site for temporary stockpiling of C&amp;D materials and to facilitate the sorting process.</li> <li>• Within the stock pile areas, the following measures should be taken to control potential environmental impacts or nuisance:                             <ul style="list-style-type: none"> <li>– Waste such as soil should be handled and stored well to ensure secure containment;</li> <li>– Covering materials during heavy rainfall;</li> <li>– Stockpiling area should be provided with covers and water spraying system to prevent materials from wind-blown or being washed away;</li> <li>– Locating stockpiles to minimise potential visual impacts; and</li> <li>– Minimising land intake of stockpile area as far as possible.</li> </ul> </li> <li>• A system should be devised for on-site sorting of C&amp;D materials. This system should include the identification of the source of generation, estimated quantity of waste generated, arrangement for on-site sorting and / or collection, designated stockpiling areas, frequency of collection by recycling contractors and frequency of removal off-site.</li> <li>• All dusty materials should be sprayed with water prior to any loading, unloading or transfer operation so as to maintain the dusty materials wet.</li> </ul>						

EIA Ref.	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*			Relevant Legislation and Guidelines
				Des	C	O	
S7.7.8.1	<p><i>Chemical Waste</i></p> <ul style="list-style-type: none"> <li>If chemical waste is produced at the construction site, the Contractor will 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.</li> <li>Chemical waste should be stored in appropriate containers and collected by a licensed chemical waste collector.</li> <li>Chemical waste (e.g. spent lubricant oil) should be disposed of at either the CWTC, or another licensed facility, in accordance with the Waste Disposal (Chemical Waste) (General) Regulation.</li> </ul>	Works sites / during construction stage	Contractor		√		<ul style="list-style-type: none"> <li>◆ WDO</li> <li>◆ Code of Practice on the Packaging, Labelling and Storage of Chemical Waste</li> <li>◆ A Guide to the Chemical Waste Control Scheme</li> </ul>
S7.7.9.1 & S7.7.11.1	<p><i>General Refuse</i></p> <ul style="list-style-type: none"> <li>General refuse should be stored in enclosed bins separately from construction and chemical waste.</li> <li>Recycling bins should also be placed to encourage recycling.</li> <li>Enclosed and covered areas should be provided preferably for general refuse collection. Routine cleaning should be also be provided to keep the areas clean.</li> <li>A reputable waste collector should be employed to remove general refuse on a daily basis</li> </ul>	Works sites / during construction and operation stages	Project Proponent / Contractor		√	√	<ul style="list-style-type: none"> <li>◆ WDO</li> </ul>
S7.7.10.1 & S7.7.10.2	<p><i>Floating Refuse</i></p> <ul style="list-style-type: none"> <li>Floating refuse should be collected and removed at regular intervals on a daily basis to keep water within the site boundary and the neighbouring water free from rubbish.</li> <li>In case of floating refuse is identified, a waste</li> </ul>	Works sites / during construction stage	Contractor		√		<ul style="list-style-type: none"> <li>◆ WDO</li> </ul>

EIA Ref.	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*			Relevant Legislation and Guidelines
				Des	C	O	
	collection vessel is needed to remove the floating materials and eventually store and dispose of together with the general refuse, after separating the recyclables for recycling, at North East New Territories Landfill (NENT) via Kwun Tong Road and Fanling Highway. <ul style="list-style-type: none"> <li>Provision of general refuse bins on site and education programme to construction workforce to minimise the potential of marine contamination.</li> </ul>						
S7.7.12.1	<ul style="list-style-type: none"> <li>Sufficient general refuse and recycling bins should be provided respectively. Meanwhile, the general refuse collection areas should be enclosed and covered properly to avoid potential losses of waste to the adjacent watercourses.</li> </ul>	Project site / during operation stage	Project Proponent			√	◆ WDO
S7.7.12.2	<ul style="list-style-type: none"> <li>Refuse scavenging and collection service will be provided by the Contractor of Marine Department (MD) under existing Contract.</li> </ul>	Project site / during operation stage	MD			√	◆ WDO

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



**Table B.6 Implementation Schedule for Land Contamination Mitigation Measures**

EIA Ref.	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*			Relevant Legislation and Guidelines
				Des	C	O	
S8.7.1.1	<ul style="list-style-type: none"> <li>No mitigation measure is required.</li> </ul>	N/A	N/A				N/A

**Table B.7 Implementation Schedule for Ecology Mitigation Measures**

EIA Ref.	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*			Relevant Legislation and Guidelines
				Des	C	O	
S9.8.1.2	<p><i>Avoidance</i></p> <ul style="list-style-type: none"> <li>Avoided encroaching on recognized sites of conservation importance (i.e. the CPA comprising the oyster shell beach, rocky outcrop with the lighthouse to the south of LYM Village).</li> <li>Avoided direct impact on area with relatively higher abundance of coral colonies (i.e. REA 2).</li> <li>Avoided direct impact on natural terrestrial habitats, (e.g. mixed woodland, natural watercourses) and associated fauna and flora.</li> </ul>	Works sites / during design, construction and operation stages	Project Proponent	√	√	√	◆ EIAO-TM
S9.8.1.3 – S9.8.1.4	<p><i>Minimisation of Direct Loss of Coral</i></p> <ul style="list-style-type: none"> <li>A detailed coral mapping should be undertaken before the commencement of the works</li> <li>A detailed Coral Mitigation Plan should be prepared prior to the implementation of mitigation measures. Suitable recipient site(s) should be identified. Description of methodology including translocation (e.g. pre-translocation survey, identification / proposal of coral recipient site(s)) and/or other best practicable mitigation measures, and post-mitigation monitoring programme should be prepared with reference to recently approved EIA and subject to comment by the AFCD before commencement of the coral mitigation. All the coral mitigation exercises should be conducted by experienced marine ecologist(s) with at least 5 years relevant experience.</li> </ul>	Works sites / prior to construction stage	Contractor		√		◆ Cap. 586
S9.8.1.3	<ul style="list-style-type: none"> <li>During operation phase, coral survey will be carried out to review and update the conditions of corals in the dredging area and its vicinity prior to each</li> </ul>	Dredging area and its vicinity / prior to each	Contractor			√	◆ Cap. 586

EIA Ref.	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*			Relevant Legislation and Guidelines
				Des	C	O	
	maintenance dredging. Subject to the findings of the coral survey, the impact on corals due to maintenance dredging will be reviewed and mitigation measures will be proposed as necessary.	maintenance dredging in operation stage					
S9.8.1.5	<p><i>Minimisation of Water Quality Impact</i></p> <ul style="list-style-type: none"> <li>Adoption of the mitigation measures recommended in water quality impact assessment during capital and maintenance dredging operations, including use of closed grab, restriction of dredging production rate (no more than 100m<sup>3</sup> per hour) and deployment of silt curtains.</li> </ul>	Works site / during dredging operation in the construction and maintenance dredging stages	Contractors		√	√	<ul style="list-style-type: none"> <li>◆ EIAO-TM</li> <li>◆ WPCO</li> <li>◆</li> </ul>
S9.8.1.6	<ul style="list-style-type: none"> <li>To minimise the contamination of wastewater discharge, accidental chemical spillage and construction site run-off to the receiving water bodies, mitigation measures recommended in water quality impact assessment should be adopted to control construction site runoff and drainage from the work areas, and to prevent runoff and drainage water with high levels of suspended solids from entering the nearby local stormwater drainage system and water bodies directly. The mitigation measures include:                             <ul style="list-style-type: none"> <li>– The good site practices outlined in ProPECC PN 1/94 "Construction Site Drainage" should be strictly followed to minimise surface runoff.</li> <li>– Surface run-off from construction sites should be discharged into storm drains via adequately designed sand / silt removal facilities such as sand traps, silt traps and sedimentation basins;</li> <li>– Open stockpiles of construction materials (e.g. aggregates, sand and fill material) on sites should be covered with tarpaulin or similar fabric during</li> </ul> </li> </ul>	Works site / during the construction stage	Contractors		√		<ul style="list-style-type: none"> <li>◆ WPCO</li> <li>◆ ProPECC PN 1/94</li> </ul>

EIA Ref.	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*			Relevant Legislation and Guidelines
				Des	C	O	
	rainstorms; – Good construction and site management practices should be observed to ensure that litter, fuels and solvents do not enter the storm water drains; and – Chemical toilets should be provided within the construction site and properly maintained. 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).						
S9.8.1.7	<i>Other Minimisation Measures</i> <ul style="list-style-type: none"> <li>To mitigate the impact of the loss, the proposed sloping seawall would be constructed with rock armours which would have spaces between rock armour units to allow intertidal organisms to grow.</li> <li>The new vertical seawall for the lookout points and viewing platform and the breakwater would also provide additional hard substrata for the recolonization of intertidal fauna and corals. Ecological features e.g. seawall enhanced with rough texture and irregular pattern would be incorporated into the design of vertical seawall as far as practicable. A submission on the detailed design of the ecological features to be adopted will be prepared subject to comment by the AFCD prior to the installation of the ecological features.</li> </ul>	Works site / during the construction and operation stages	Project Proponent / Contractors		√	√	◆ EIAO-TM

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

**Table B.8 Implementation Schedule for Fisheries Mitigation Measures**

EIA Ref.	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*			Relevant Legislation and Guidelines
				Des	C	O	
S10.7.1.3	<ul style="list-style-type: none"> <li>During the capital and maintenance dredging operations, mitigation measures (including use of closed grab, silt curtains and restriction of dredging rate to no more than 100m<sup>3</sup> per hour) recommended in the water quality impact assessment would be implemented to control water quality impacts to within acceptable levels. These mitigation measures would also control and minimize the indirect impacts on fisheries resources due to deterioration in water quality as a result of both capital and maintenance dredging works.</li> </ul>	Works site / during the construction and operation stages	Contractors		√	√	<ul style="list-style-type: none"> <li>◆ EIAO-TM</li> <li>◆ ProPECC PN 1/94</li> <li>◆ WPCO</li> </ul>

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

**Table B.9 Implementation Schedule for Landscape and Visual Impact Mitigation Measures**

EIA Ref.	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*			Relevant Legislation and Guidelines
				Des	C	O	
Table 11.10	<ul style="list-style-type: none"> <li>• CM1 - All the existing Trees to be retained and not to be affected by the Project should be carefully protected during the construction phase in accordance with DEVB TCW No. 7/2015 titled "Tree Preservation" and the latest "Guidelines on Tree Preservation during Development" issued by GLTM Section of DEVB, including provision of Tree Protection Zones (TPZs). Any existing vegetation in landscaped areas and natural terrain not to be affected by the Project should also be carefully preserved. Therefore, these existing landscape elements can maintain their qualities throughout the construction phase.</li> <li>• CM4 - Lighting for the construction works at night, if any, should be carefully controlled to prevent light overspill to the nearby VSRs and into the sky.</li> <li>• CM5 - Decorative Hoardings, with designs and forms compatible with the surrounding settings, should be erected during the construction phase to minimise the potential landscape and visual impacts from the construction works and activities, e.g. avoiding unintended destruction of existing trees and other landscape elements, and reducing visual bulkiness of the screen hoardings, etc.</li> <li>• CM6 - The layout and arrangement of construction site facilities which include site office and temporary storage area should be properly managed and construction activities at the site should be carefully supervised and controlled to minimise potential</li> </ul>	Works site / during the design and construction stages	Project Proponent/ Contractors	√	√		<ul style="list-style-type: none"> <li>◆ EIAO-TM</li> <li>◆ DEVB TC (W) No.7/2015</li> <li>◆ Guidelines on Tree Preservation during Development</li> </ul>

EIA Ref.	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*			Relevant Legislation and Guidelines
				Des	C	O	
	adverse landscape and visual impacts.						
Table 11.10	<ul style="list-style-type: none"> <li>CM7 - A buffer zone with a minimum distance of about 10m will be provided between the CPA and the boundary of dredging works to minimise the potential impact on the CPA arising from the dredging activities.</li> </ul>	Works site / during the design construction and operation stages	Project Proponent/ Contractors	√	√	√	
Table 11.10	<ul style="list-style-type: none"> <li>CM8 - Silt curtains will be deployed to enclose the dredging works to minimise the potential water quality impact (e.g. dispersion of suspended sediments) on the CPA.</li> <li>CM9 - The dredging works will be closely supervised by site staff to ensure no unauthorised works will be carried out within the CPA.</li> </ul>	Works site / during the construction stage	Project Proponent/ Contractors		√		<ul style="list-style-type: none"> <li>◆ EIAO-TM</li> <li>◆ WPCO</li> </ul>
Table 11.11	<ul style="list-style-type: none"> <li>OM1 - A buffer zone with a minimum distance of about 10m will be provided between the CPA and the boundary of maintenance dredging works to minimise the potential impact on the CPA arising from the dredging activities.</li> <li>OM2 - Silt curtains will be deployed to enclose the maintenance dredging works to minimise the potential water quality impact (e.g. dispersion of suspended sediments) on the CPA.</li> <li>OM 3 - The maintenance dredging works will be closely supervised by site staff to ensure no unauthorised works will be carried out within the CPA.</li> </ul>	Works site / during maintenance dredging in operation stage	Project Proponent/ Contractors			√	<ul style="list-style-type: none"> <li>◆ EIAO-TM</li> </ul>
Table 11.11	<ul style="list-style-type: none"> <li>OM 4 - The Aboveground/Above-sea-level Structures/Hardscape Features of the Project, including the pavilion, the breakwater, and the promenade with public landing facility, etc. and elements of streetscape in regard to the layouts, forms, materials and finishes shall be sensitively</li> </ul>	Works site / during the design and operation stages	Project Proponent/ Contractors	√		√	<ul style="list-style-type: none"> <li>◆ EIAO-TM</li> </ul>

EIA Ref.	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*			Relevant Legislation and Guidelines
				Des	C	O	
	designed, so that the structures/hardscape features can blend with the surrounding landscape and visual context, e.g. the pavilion should be visually permeable and its appearance and orientation should take into account the overall landscape master plan of the proposed enhancement works. The proposed colour and texture for the proposed breakwater and lookout points shall be visually compatible with the adjacent landscape elements.						
Table 11.11	<ul style="list-style-type: none"> <li>• OM5 - Buffer Planting shall be provided at the perimeter of potential intrusive aboveground structures, so as to visually screen and soften their hard edges and surfaces and create a more harmonious landscape.</li> <li>• OM 6 - Opportunity of Amenity Planting shall be maximised within the Project, so that the proposed works will be more compatible and harmonious with the surroundings landscape- and visual-wise.</li> <li>• OM7 - During the Operation Phase, all disturbed hard and soft landscape areas within temporary works sites and works areas caused by the proposed works shall have already been reinstated equal or better quality to the satisfaction of the relevant Government Departments, so as to maintain or improve the existing landscape and visual quality.</li> </ul>	Works site / during the operation stage	Project Proponent/ Contractors			√	◆ EIAO-TM

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