

Appendix A1

Implementation Schedule of the Recommended Mitigation Measures for New Distributor Roads Serving the Planned KTD

Table A1.1 Implementation Schedule for Air Quality Measures

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S3.2	8 times daily watering of the work site with active dust emitting activities.	Work site / during construction	Contractor		✓			EIAO-TM
S3.2	<p>Implementation of dust suppression measures stipulated in Air Pollution Control (Construction Dust) Regulation. The following mitigation measures, good site practices and a comprehensive dust monitoring and audit programme are recommended to minimize cumulative dust impacts.</p> <p>Stockpiling site(s) should be lined with impermeable sheeting and banded. Stockpiles should be fully covered by impermeable sheeting to reduce dust emission.</p> <p>Misting for the dusty material should be carried out before being loaded into the vehicle.</p> <p>Any vehicle with an open load carrying area should have properly fitted side and tail boards.</p> <p>Material having the potential to create dust should not be loaded from a level higher than the side and tail boards and should be dampened and covered by a clean tarpaulin.</p> <p>The tarpaulin should be properly secured and should extend at least 300 mm over the edges of the sides and tailboards. The material should also be dampened if necessary before transportation.</p> <p>The vehicles should be restricted to maximum speed of 10 km per hour and confined haulage and delivery vehicle to designated roadways inside the site. On-site unpaved roads should be compacted and kept free of loose materials.</p> <p>Vehicle washing facilities should be provided at every</p>	Work site / during construction	Contractor		✓			EIAO-TM & Air Quality Objective

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
	vehicle exit point. The area where vehicle washing takes place and the section of the road between the washing facilities and the exit point should be paved with concrete, bituminous materials or hardcores. Every main haul road should be scaled with concrete and kept clear of dusty materials or sprayed with water so as to maintain the entire road surface wet. Every stock of more than 20 bags of cement should be covered entirely by impervious sheeting placed in an area sheltered on the top and the three sides; and Every vehicle should be washed to remove any dusty materials from its body and wheels before leaving the construction sites.							

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

Table A1.2 Implementation Schedule for Noise Measures

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S3.3	Use of quiet PME, movable barriers barrier for Asphalt Paver, Breaker, Excavator and Hand-held breaker and full enclosure for Air Compressor, Bar Bender, Concrete Pump, Generator and Water Pump.	Work Sites / Construction Period	Contractor		✓			EIAO-TM, NCO
S3.3	Good Site Practice: Only well-maintained plant should be operated on-site and plant should be serviced regularly during the construction program. Silencers or mufflers on construction equipment should be utilized and should be properly maintained during the construction program. Mobile plant, if any, should be sited as far away from NSRs as possible. Machines and plant (such as trucks) that may be in intermittent use should be shut down between works periods or should be throttled down to a minimum. 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. Material stockpiles and other structures should be effectively utilized, wherever practicable, in screening noise from on-site construction activities.	Work Sites / Construction Period	Contractor		✓			EIAO-TM, NCO
S3.3	Scheduling of Construction Works during School Examination Period	Construction site near to school / Examination Period	Contractor		✓			

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

Table A1.3 Implementation Schedule for Water Quality Measures

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S3.4	<p>Operational Phase</p> <p>A surface water drainage system should be provided to collect road runoff. It is recommended that the road drainage should be provided with adequately designed silt trap and oil interceptors, as necessary. The design of the operational stage mitigation measures for the road works shall take into account the guidelines published in ProPECC PN 5/93 "Drainage Plans subject to Comment by the EPD"</p>	Project site / during design and operational stages	CEDD	✓	✓			EIAO-TM; WPCO, ProPECC PN 5/93
S3.4	<p>Construction Phase</p> <p><u>Construction Runoff</u></p> <p>Exposed soil areas should be minimised to reduce the potential for increased siltation, contamination of runoff, and erosion. Construction runoff related impacts associated with the above ground construction activities can be readily controlled through the use of appropriate mitigation measures which include: use of sediment traps adequate maintenance of drainage systems to prevent flooding and overflow</p>	Work Sites / during construction	Contractor		✓			EIAO-TM, WPCO, ProPECC PN 1/94

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S3.4	Construction site should be provided with adequately designed perimeter channel and pre-treatment facilities and proper maintenance. The boundaries of critical areas of earthworks should be marked and surrounded by dykes or embankments for flood protection. Temporary ditches should be provided to facilitate runoff discharge into the appropriate watercourses, via a silt retention pond. Permanent drainage channels should incorporate sediment basins or traps and baffles to enhance deposition rates. The design of efficient silt removal facilities should be based on the guidelines in Appendix A1 of ProPECC PN 1/94.	Work Sites / during construction	Contractor		✓			EIAO-TM, WPCO, ProPECC PN 1/94
S3.4	Ideally, construction works should be programmed to minimise surface excavation works during the rainy season (April to September). All exposed earth areas should be completed as soon as possible after earthworks have been completed, or alternatively, within 14 days of the cessation of earthworks where practicable. If excavation of soil cannot be avoided during the rainy season, or at any time of year when rainstorms are likely, exposed slope surfaces should be covered by tarpaulin or other means.	Work Sites / during construction	Contractor		✓			EIAO-TM, WPCO, ProPECC PN 1/94
S3.4	Sediment tanks of sufficient capacity, constructed from pre-formed individual cells of approximately 6 to 8 m ³ capacity, are recommended as a general mitigation measure which can be used for settling surface runoff prior to disposal. The system capacity is flexible and able to handle multiple inputs from a variety of sources and particularly suited to applications where the influent is pumped.	Work Sites / during construction	Contractor		✓			EIAO-TM, WPCO, ProPECC PN 1/94

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S3.4	Open stockpiles of construction materials (for examples, aggregates, sand and fill material) of more than 50 m ³ should be covered with tarpaulin or similar fabric during rainstorms. Measures should be taken to prevent the washing away of construction materials, soil, silt or debris into any drainage system.	Work Sites / during construction	Contractor		✓			EIAO-TM, WPCO, ProPECC PN 1/94
S3.4	Manholes (including newly constructed ones) should always be adequately covered and temporarily sealed so as to prevent silt, construction materials or debris being washed into the drainage system and storm runoff being directed into foul sewers.	Work Sites / during construction	Contractor		✓			EIAO-TM, WPCO, ProPECC PN 1/94
S3.4	Precautions to be taken at any time of year when rainstorms are likely, actions to be taken when a rainstorm is imminent or forecast, and actions to be taken during or after rainstorms are summarised in Appendix A2 of ProPECC PN 1/94. Particular attention should be paid to the control of silty surface runoff during storm events.	Work Sites / during construction	Contractor		✓			EIAO-TM, WPCO, ProPECC PN 1/94
S3.4	Oil interceptors should be provided in the drainage system and regularly cleaned to prevent the release of oils and grease into the storm water drainage system after accidental spillages. The interceptor should have a bypass to prevent flushing during periods of heavy rain.	Work Sites / during construction	Contractor		✓			EIAO-TM, WPCO, ProPECC PN 1/94

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S3.4	All vehicles and plant should be cleaned before leaving a construction site to ensure no earth, mud, debris and the like is deposited by them on roads. An adequately designed and located wheel washing bay should be provided at every site exit, and wash-water should have sand and silt settled out and removed at least on a weekly basis to ensure the continued efficiency of the process. The section of access road leading to, and exiting from, the wheel-wash bay to the public road should be paved with sufficient backfall toward the wheel-wash bay to prevent vehicle tracking of soil and silty water to public roads and drains.	Work Sites / during construction	Contractor		✓			EIAO-TM, WPCO, ProPECC PN 1/94
S3.4	<u>Drainage</u> It is recommended that on-site drainage system should be installed prior to the commencement of other construction activities. Sediment traps should be installed in order to minimise the sediment loading of the effluent prior to discharge into foul sewers. There should be no direct discharge of effluent from the site into the sea.	Work Sites / during construction	Contractor		✓			EIAO-TM, WPCO, ProPECC PN 1/94
S3.4	All temporary and permanent drainage pipes and culverts provided to facilitate runoff discharge should be adequately designed for the controlled release of storm flows. All sediment control measures should be regularly inspected and maintained to ensure proper and efficient operation at all times and particularly following rain storms. The temporarily diverted drainage should be reinstated to its original condition when the construction work has finished or the temporary diversion is no longer required.	Work Sites / during construction	Contractor		✓			EIAO-TM, WPCO, ProPECC PN 1/94

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S3.4	All fuel tanks and storage areas should be provided with locks and be located on sealed areas, within bounds of a capacity equal to 110% of the storage capacity of the largest tank, to prevent spilled fuel oils from reaching the coastal waters of the Victoria Harbour WCZ.	Work Sites / during construction	Contractor		✓			EIAO-TM, WPCO, ProPECC PN 1/94, WDO
S3.4	<u>Sewage Effluent</u> Construction work force sewage discharges on site are expected to be connected to the existing trunk sewer or sewage treatment facilities. The construction sewage may need to be handled by portable chemical toilets prior to the commission of the on-site sewer system. Appropriate numbers of portable toilets should be provided by a licensed contractor to serve the large number of construction workers over the construction site. The Contractor should also be responsible for waste disposal and maintenance practices.	Work Sites / during construction	Contractor		✓			EIAO-TM, WPCO
S3.4	<u>Stormwater Discharges</u> Minimum distances of 100 m should be maintained between the existing or planned stormwater discharges and the existing or planned seawater intakes	Work Sites / during construction	Contractor		✓			EIAO-TM, WPCO, TM-DSS
S3.4	<u>Debris and Litter</u> In order to maintain water quality in acceptable conditions with regard to aesthetic quality, contractors should be required, under conditions of contract, to ensure that site management is optimised and that disposal of any solid materials, litter or wastes to marine waters does not occur	Work Sites / during construction	Contractor		✓			EIAO-TM, WPCO, WDO

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

Table A1.4 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	Dec	
S3.5	<p>Good Site Practices</p> <p>It is not anticipated that adverse waste management related impacts would arise, provided that good site practices are adhered to. Recommendations for good site practices during construction activities include:</p> <p>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</p> <p>Training of site personnel in proper waste management and chemical waste handling procedures</p> <p>Provision of sufficient waste disposal points and regular collection for disposal</p> <p>Appropriate measures to minimise windblown litter and dust during transportation of waste by either covering trucks or by transporting wastes in enclosed containers</p> <p>A recording system for the amount of wastes generated, recycled and disposed of (including the disposal sites)</p>	Work Sites / during construction	Contractor					EIAO-TM, WDO

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S3.5	<p>Waste Reduction Measures</p> <p>Good management and control can prevent the generation of a significant amount of waste. Waste reduction is best achieved at the planning and design stage, as well as by ensuring the implementation of good site practices. Recommendations to achieve waste reduction include:</p> <ul style="list-style-type: none"> Sort C&D waste from demolition of the remaining structures to recover recyclable portions such as metals Segregation and storage of different types of waste in different containers, skips or stockpiles to enhance reuse or recycling of materials and their proper disposal Encourage collection of aluminium cans, PET bottles and paper by providing separate labelled bins to enable these wastes to be segregated from other general refuse generated by the work force Any unused chemicals or those with remaining functional capacity should be recycled Proper storage and site practices to minimise the potential for damage or contamination of construction materials 	Work Sites / during construction	Contractor				EIAO-TM, WDO	

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
	<p>Construction and Demolition Materials</p> <p>Mitigation measures and good site practices should be incorporated in the contract document to control potential environmental impact from handling and transportation of C&D material. The mitigation measures include:</p> <p>Where it is unavoidable to have transient stockpiles of C&D material within the Project work site pending collection for disposal, the transient stockpiles shall be located away from waterfront or storm drains as far as possible.</p> <p>Open stockpiles of construction materials or construction wastes on-site should be covered with tarpaulin or similar fabric.</p> <p>Skip hoist for material transport should be totally enclosed by impervious sheeting.</p> <p>Every vehicle should be washed to remove any dusty materials from its body and wheels before leaving a construction site.</p> <p>The area where vehicle washing takes place and the section of the road between the washing facilities and the exit point should be paved with concrete, bituminous materials or hardcores.</p> <p>The load of dusty materials carried by vehicle leaving a construction site should be covered entirely by clean impervious sheeting to ensure dust materials do not leak from the vehicle.</p> <p>All dusty materials should be sprayed with water prior to any loading, unloading or transfer operation so as to maintain the dusty materials wet.</p>	Work sites / during construction	Contractor and Independent Environmental Checker					ETWB TCW No. 33/2002, 31/2004, 19/2005

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
	<p>The height from which excavated materials are dropped should be controlled to a minimum practical height to limit fugitive dust generation from unloading.</p> <p>When delivering inert C&D material to public fill reception facilities, the material should consist entirely of inert construction waste and of size less than 250mm or other sizes as agreed with the Secretary of the Public Fill Committee. In order to monitor the disposal of the surplus C&D material at the designed public fill reception facility and to control fly tipping, a trip-ticket system as stipulated in the ETWB TCW No. 31/2004 "Trip Ticket System for Disposal of Construction and Demolition Materials" should be included as one of the contractual requirements and implemented by an Environmental Team undertaking the Environmental Monitoring and Audit work. An Independent Environmental Checker should be responsible for auditing the results of the system.</p>	<p>Work sites / during construction</p>	<p>Contractor and Independent Environmental Checker</p>					<p>ETWB TCW No. 33/2002, 31/2004, 19/2005</p>
S3.5	<p>Chemical Waste</p> <p>After use, chemical wastes (for example, cleaning fluids, solvents, lubrication oil and fuel) should be handled according to the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes. Spent chemicals should be collected by a licensed collector for disposal at the CWTF or other licensed facility, in accordance with the <i>Waste Disposal (Chemical Waste) (General) Regulation</i></p>	<p>Work Sites / during construction</p>	<p>Contractor</p>					<p>Waste Disposal (Chemical Waste) (General) Regulation</p> <p>Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes</p>

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S3.5	<p>General Refuse</p> <p>General refuse should be stored in enclosed bins or compaction units separate from C&D material. A licensed waste collector should be employed by the contractor to remove general refuse from the site, separately from C&D material. Effective collection and storage methods (including enclosed and covered area) of site wastes would be required to prevent waste materials from being blown around by wind, wastewater discharge by flushing or leaching into the marine environment, or creating odour nuisance or pest and vermin problem</p>	Work Sites / during construction	Contractor					<p>Waste Disposal Ordinance</p> <p>Water Pollution Control Ordinance</p>

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

Table A1.5 Implementation Schedule for Land Contamination Measures

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S3.6.57	For any excavation works conducted at Radar Station and ex-GFS building, As the risk due to dermal contact with groundwater by site workers is uncertain, it is recommended that personnel protective equipment (PPE) be used by site workers as a mitigation measure.	Radar Station and ex-GFS building	Contractor					
S3.6.58	For EMSD Kowloon Bay Vehicle Maintenance Workshop EMSD as the current occupant should conduct a land contamination assessment and complete the necessary remediation according to the relevant guidelines prior to future handing over the site to the Government for construction of the proposed Road D4.	EMSD Kowloon Bay Vehicle Maintenance Workshop / Prior to construction of Road D4	EMSD					<ul style="list-style-type: none"> • “Guidance Note for Contaminated Land Assessment and Remediation” • “Guidance Manual for Use of Risk-based Remediation Goals for Contaminated Land Management” • “Guidance Notes for Investigation and Remediation of

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
								Contaminated Sites of Petrol Filling Stations, Boatyards and Car Repair /Dismantling Workshop“ .

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

Table A1.6 Implementation Schedule for Landscape and Visual Impacts

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S3.8.12	<p>Construction Phase</p> <p>All existing trees should be carefully protected during construction.</p> <p>Trees unavoidably affected by the works should be transplanted where practical. Detailed transplanting proposal will be submitted to relevant government departments for approval in accordance with ETWBC 2/2004 and 3/2006. Final locations of transplanted trees should be agreed prior to commencement of the work.</p> <p>Control of night-time lighting.</p> <p>Erection of decorative screen hoarding.</p>	Works area / During Construction Phase	Contractor	✓	✓			EIAO-TM
S3.8.13	<p>Operation Phase</p> <p>Compensatory tree planting should be incorporated into the proposed projects where trees are affected.</p> <p>Tall buffer screen tree / shrub / climber planting should be incorporated to soften hard engineering structures and facilities.</p> <p>Sensitive streetscape design should be incorporated along all new roads to reflect the new urban development in Kai Tak.</p> <p>Structure, ornamental tree / shrub / climber planting should be provided along roadside amenity strips and central dividers to enhance the townscape quality, where space is available.</p> <p>Aesthetically pleasing design as regard to the form, material and finishes should be incorporated to all buildings, engineering structures and associated infrastructure facilities.</p>	Project area / During Design stage and Operation Phase	CEDD	✓		✓		EIAO-TM

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

Appendix A2

Implementation Schedule of the Recommended Mitigation Measures for New Sewage Pumping Stations Serving the Planned KTD

Table A2.1 Implementation Schedule for Air Quality Measures

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S4.2	<p>Implementation of dust suppression measures stipulated in <i>Air Pollution Control (Construction Dust) Regulation</i>. The following mitigation measures, good site practices and a comprehensive environmental audit programme are recommended to minimize cumulative dust impacts.</p> <ul style="list-style-type: none"> • Stockpiling site(s) should be lined with impermeable sheeting and banded. Stockpiles should be fully covered by impermeable sheeting to reduce dust emission. • Misting for the dusty material should be carried out before being loaded into the vehicle. • Any vehicle with an open load carrying area should have properly fitted side and tail boards. • Material having the potential to create dust should not be loaded from a level higher than the side and tail boards and should be dampened and covered by a clean tarpaulin. • The tarpaulin should be properly secured and should extend at least 300 mm over the edges of the sides and tailboards. The material should also be dampened if necessary before transportation. • The vehicles should be restricted to maximum speed of 10 km per hour and confined haulage and delivery vehicle to designated roadways inside the site. On-site unpaved roads should be compacted and kept free of loose materials. • Vehicle washing facilities should be provided at every vehicle exit point. • The area where vehicle washing takes place and the section of the road between the washing facilities and 	Work Sites / During Construction	Contractor		✓			EIAO-TM & Air Quality Objective

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S4.2	<p>the exit point should be paved with concrete, bituminous materials or hardcores.</p> <ul style="list-style-type: none"> Every main haul road should be sealed with concrete and kept clear of dusty materials or sprayed with water so as to maintain the entire road surface wet. Every stock of more than 20 bags of cement should be covered entirely by impervious sheeting placed in an area sheltered on the top and the three sides. Every vehicle should be washed to remove any dusty materials from its body and wheels before leaving the construction sites. <p>(i) Provision of deodorization system and odour sources being enclosed; and</p> <p>(ii) Commissioning tests for all deodorization system should be included in the Design and Construction Contract Document.</p>	PS1, PS1A, PS2, PS3, SPS at Site 5A1 and PS6	DSD (for the initial phase of PS1 & PS3) CEDD (for PS1A, PS2, SPS at Site 5A1, PS6, and the ultimate phase of PS1 & PS3)	✓	✓			EIAO-TM

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Table A2.2 Implementation Schedule for Noise Measures

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S4.3	Use of quiet PME, movable barriers barrier for Asphalt Paver, Breaker, Excavator and Hand-held breaker and full enclosure for Air Compressor, Bar Bender, Concrete Pump, Generator and Water Pump.	Work Sites / During Construction	Contractor		✓			EIAO-TM, NCO
S4.3	<p>Good Site Practice:</p> <ul style="list-style-type: none"> Only well-maintained plant should be operated on-site and plant should be serviced regularly during the construction program. Silencers or mufflers on construction equipment should be utilized and should be properly maintained during the construction program. Mobile plant, if any, should be sited as far away from NSRs as possible. Machines and plant (such as trucks) that may be in intermittent use should be shut down between works periods or should be throttled down to a minimum. 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. Material stockpiles and other structures should be effectively utilized, wherever practicable, in screening noise from on-site construction activities. 	Work Sites / During Construction	Contractor		✓			EIAO-TM, NCO
4.3	All the ventilation fans installed in sewage pumping stations should be provided with silencers or acoustics treatment.	PS1, PS1A, PS2, PS3, SPS at Site 5A1 and PS6	DSD (for the initial phase of PS1 & PS3) CEDD (for PS1A, PS2, SPS at Site 5A1, PS6, and the ultimate phase of PS1 & PS3)	✓		✓		EIAO-TM

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Table A2.3 Implementation Schedule for Water Quality Measures

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S4.4	<p>Operational Phase</p> <ul style="list-style-type: none"> (i) Dual power supply or emergency generator should be provided at all the SPSs to secure electrical power supply; (ii) Standby pumps should be provided at all SPSs to ensure smooth operation of the SPS during maintenance of the duty pumps; (iii) An alarm should be installed to signal emergency high water level in the wet well at all SPSs; and (iv) For all unmanned SPSs, a remote monitor system connecting SPSs with the control station through telemetry system should be provided so that swift actions could be taken in case of malfunction of unmanned facilities. 	PS1, PS1A, PS2, PS3, SPS at Site 5A1 and PS6	DSD (for the initial phase of PS1 & PS3) CEDD (for PS1A, PS2, SPS at Site 5A1, PS6, and the ultimate phase of PS1 & PS3)	✓	✓	✓		EIAO-TM, WPCO

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S4.4	<p>Construction Phase</p> <p><u>Construction site runoff and drainage</u></p> <p>Construction site runoff and drainage should be prevented or minimised in accordance with the guidelines stipulated in the EPD's Practice Note for Professional Persons, Construction Site Drainage (ProPECC PN 1/94). Good housekeeping and stormwater best management practices, as detailed in below, should be implemented to ensure that all construction runoff complies with WPCO standards and that no unacceptable impact on the WSRs arises due to construction of the Project. All discharges from the construction site should be controlled to comply with the standards for effluents discharged into the Victoria Harbour WCZ under the TM-DSS.</p>	Work Sites / During Construction	Contractor		✓			EIAO-TM, WPCO, ProPECC PN 1/94
S4.4	<p><u>Sewage Effluent</u></p> <p>Construction work force sewage discharges on site are expected to be connected to the existing trunk sewer or sewage treatment facilities. The construction sewage may need to be handled by portable chemical toilets prior to the commission of the on-site sewer system. Appropriate numbers of portable toilets shall be provided by a licensed contractor to serve the large number of construction workers over the construction site. The Contractor shall also be responsible for waste disposal and maintenance practices.</p>	Work Sites / During Construction	Contractor		✓			EIAO-TM, WPCO

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S4.4	<p><u>Refuse and Debris</u></p> <p>It is recommended that collection and removal of floating refuse should be performed at regular intervals on a daily basis. The contractor should be responsible for keeping the water within the site boundary and the neighbouring water free from rubbish during construction.</p> <p><u>Stormwater Discharges</u></p> <p>Minimum distances of 100 m shall be maintained between the existing or planned stormwater discharges and the existing or planned seawater intakes.</p>	Work Sites / During Construction	Contractor		✓			EIAO-TM, WPCO
S4.4	<p><u>Stormwater Discharges</u></p> <p>Minimum distances of 100 m shall be maintained between the existing or planned stormwater discharges and the existing or planned seawater intakes.</p>	Work Sites / During Construction	Contractor		✓			EIAO-TM, WPCO

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

Table A2.4 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	Dec	
S4.5	<p><u>Good Site Practices</u></p> <p>It is not anticipated that adverse waste management related impacts would arise, provided that good site practices are adhered to. Recommendations for good site practices during the construction activities include:</p> <ul style="list-style-type: none"> • 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. • Training of site personnel in proper waste management and chemical waste handling procedures. • Provision of sufficient waste disposal points and regular collection for disposal. • Appropriate measures to minimise windblown litter and dust during transportation of waste by either covering trucks or by transporting wastes in enclosed containers. • A recording system for the amount of wastes generated, recycled and disposed of (including the disposal sites). 	Work Sites / During Construction	Contractor	Des	C	O	Dec	EIAO-TM, WDO

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S4.5	<p><u>Waste Reduction Measures</u></p> <p>Good management and control can prevent the generation of a significant amount of waste. Waste reduction is best achieved at the planning and design stage, as well as by ensuring the implementation of good site practices. Recommendations to achieve waste reduction include:</p> <ul style="list-style-type: none"> • Segregation and storage of different types of waste in different containers, skips or stockpiles to enhance reuse or recycling of materials and their proper disposal. • Encourage collection of aluminium cans, PET bottles and paper by providing separate labelled bins to enable these wastes to be segregated from other general refuse generated by the work force. • Any unused chemicals or those with remaining functional capacity shall be recycled. • Proper storage and site practices to minimise the potential for damage or contamination of construction materials. 	Work sites / during construction	Contractor	√				EIAO-TM, WDO
S4.5	<p><u>Construction and Demolition Materials</u></p> <p>Mitigation measures and good site practices should be incorporated in the contract document to control potential environmental impact from handling and transportation of C&D material. The mitigation measures include:</p> <ul style="list-style-type: none"> • Where it is unavoidable to have transient stockpiles of C&D material within the Project work site pending collection for disposal, the transient stockpiles shall be located away from waterfront or storm drains as far as possible. 	Work site / during construction	Contractor and Independent Environmental Checker	√				ETWB TCW No. 33/2002, 31/2004, 19/2005

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
	<ul style="list-style-type: none"> Open stockpiles of construction materials or construction wastes on-site should be covered with tarpaulin or similar fabric. Skip hoist for material transport should be totally enclosed by impervious sheeting. Every vehicle should be washed to remove any dusty materials from its body and wheels before leaving a construction site. The area where vehicle washing takes place and the section of the road between the washing facilities and the exit point should be paved with concrete, bituminous materials or hardcores. The load of dusty materials carried by vehicle leaving a construction site should be covered entirely by clean impervious sheeting to ensure dust materials do not leak from the vehicle. All dusty materials should be sprayed with water prior to any loading, unloading or transfer operation so as to maintain the dusty materials wet. The height from which excavated materials are dropped should be controlled to a minimum practical height to limit fugitive dust generation from unloading. 							

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S4.5	<p>When delivering inert C&D material to public fill reception facilities, the material should consist entirely of inert construction waste and of size less than 250mm or other sizes as agreed with the Secretary of the Public Fill Committee. In order to monitor the disposal of the surplus C&D material at the designed public fill reception facility and to control fly tipping, a trip-ticket system as stipulated in the ETWB TCW No. 31/2004 “Trip Ticket System for Disposal of Construction and Demolition Materials” should be included as one of the contractual requirements and implemented by an Environmental Team undertaking the Environmental Monitoring and Audit work. An Independent Environmental Checker should be responsible for auditing the results of the system.</p> <p><u>Chemical Waste</u> After use, chemical wastes (for example, cleaning fluids, solvents, lubrication oil and fuel) should be handled according to the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes. Spent chemicals should be collected by a licensed collector for disposal at the CWTF or other licensed facility, in accordance with the <i>Waste Disposal (Chemical Waste) (General) Regulation</i>.</p>	Work Sites / during construction	Contractor			√		<p>Waste Disposal (Chemical Waste) (General) Regulation</p> <p>Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes</p>

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*			Relevant Legislation and Guidelines
				Des	C	O	
S4.5	<p><u>General Refuse</u></p> <p>General refuse should be stored in enclosed bins or compaction units separate from C&D material. A licensed waste collector should be employed by the contractor to remove general refuse from the site, separately from C&D material. Effective collection and storage methods (including enclosed and covered area) of site wastes would be required to prevent waste materials from being blown around by wind, wastewater discharge by flushing or leaching into the marine environment, or creating odour nuisance or pest and vermin problem.</p>						

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

Table A2.5 Implementation Schedule for Land Contamination

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S4.6.25	<p>For EMSD Sung Wong Toi Vehicle Maintenance Workshop</p> <ul style="list-style-type: none"> EMSD as the current occupant of the EMSD Headquarters should conduct a land contamination assessment and complete the necessary remediation according to the relevant guidelines prior to handing over the site to the Government for redevelopment in the future. 	<p>EMSD Sung Wong Toi Vehicle Maintenance Workshop / Prior to construction of PS NPS</p>	EMSD	√			√	<p>“Guidance Note for Contaminated Land Assessment and Remediation”</p> <p>“Guidance Manual for Use of Risk-based Remediation Goals for Contaminated Land Management</p> <p>“Guidance Notes for Investigation and Remediation of Contaminated Sites of Petrol Filling Stations, Boatyards and Car Repair /Dismantling Workshop”</p>

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

Table A2.6 Implementation Schedule for Landscape and Visual Impact

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S4.8	<p>Construction Phase</p> <ul style="list-style-type: none"> All existing trees shall be carefully protected during construction. Trees unavoidably affected by the works should be transplanted where practical. Detailed transplanting proposal will be submitted to relevant government departments for approval in accordance with ETWBC 2/2004 and 3/2006. Final locations of transplanted trees should be agreed prior to commencement of the work. Control of night-time lighting. Erection of decorative screen hoarding. 	Working site / During Construction Phase	Contractor	✓	✓			EIAO-TM
S4.8	<p>Operation Phase</p> <ul style="list-style-type: none"> Compensatory tree planting should be incorporated into the proposed projects where trees are affected. Tall buffer screen tree / shrub / climber planting should be incorporated to soften hard engineering structures and facilities. Aesthetically pleasing design as regard to the form, material and finishes shall be incorporated to all buildings, engineering structures and associated infrastructure facilities. 	Working site / During Design stage and Operation Phase	DSD/CEDD	✓		✓		EIAO-TM

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

Appendix A3

***Implementation Schedule of the Recommended
Mitigation Measures for Decommissioning of the
remaining parts (Ex-GFS Building and Radar
Station) of the former Kai Tak Airport***

Table A3.1 Implementation Schedule for Air Quality Measures

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S5.2.19	<p>Implementation of dust suppression measures stipulated in <i>Air Pollution Control (Construction Dust) Regulation</i>. The following mitigation measures and good site practices are recommended to minimize cumulative dust impacts.</p> <p>The excavation area should be limited to as small in size as possible and backfilled with clean and/or treated soil shortly after excavation work.</p> <p>The exposed excavated area should be covered by the tarpaulin during night time.</p> <p>The top layer soils should be sprayed with fine misting of water immediately before the excavation.</p> <p>Stockpiling site(s) should be lined with impermeable sheeting and banded. Stockpiles should be fully covered by impermeable sheeting to reduce dust and other air pollutants emission.</p> <p>Misting for the dusty material should be carried out before being loaded into the vehicle.</p> <p>Any vehicle with an open load carrying area should have properly fitted side and tail boards.</p> <p>Material having the potential to create dust should not be loaded from a level higher than the side and tail boards and should be dampened and covered by a clean tarpaulin.</p> <p>The tarpaulin should be properly secured and should extend at least 300 mm over the edges of the sides and tailboards. The material should also be dampened if necessary before transportation.</p> <p>The vehicles should be restricted to maximum speed of 10 km per hour and confined haulage and delivery</p>	Work sites / during decommissioning	Contractor				✓	EIAO-TM & Air Quality Objective

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
	<p>vehicle to designated roadways inside the site. On-site unpaved roads should be compacted and kept free of loose materials.</p> <p>Vehicle washing facilities should be provided at every vehicle exit point.</p> <p>The area where vehicle washing takes place and the section of the road between the washing facilities and the exit point should be paved with concrete, bituminous materials or hardcores.</p> <p>Every main haul road should be sealed with concrete and kept clear of dusty materials or sprayed with water so as to maintain the entire road surface wet.</p> <p>Every stock of more than 20 bags of cement should be covered entirely by impervious sheeting placed in an area sheltered on the top and the three sides.</p> <p>Every vehicle should be washed to remove any dusty materials from its body and wheels before leaving the construction sites.</p>							
S5.2.20	<p>Solidification</p> <p>The solidification pit/area should be provided with dust suppression measures.</p> <p>Handling and mixing of cement shall follow Air Pollution Control (Construction Dust) Regulation to limit cement emission.</p> <p>The bin should be covered during residence period after mixing process.</p>	Work sites / during solidification and biopiling process	Contractor				✓	EIAO-TM & Air Quality Objective
	Biopiling							

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
	<p>During the course of biopile formation, the stockpiled soils at the biopiles should be covered by tarpaulin or low permeable sheet to avoid fugitive emissions of dust or any air pollutants from the biopiles affecting the surrounding environment and to minimise runoff from the stockpiled soils. Biopile(s) should be covered by impermeable sheeting (such that no longer than 5m of a biopile should be exposed to open air) to avoid fugitive emissions of dust or any pollutants from the biopile(s).</p> <p>Upon formation of a biopile, the biopile should be covered by low permeable geotextiles to prevent dust emission and runoff.</p> <p>During the operation of biopile, the biopiles should be fully covered to control the extraction of VOCs.</p> <p>The vented air from the biopile(s) should be connected to blower and carbon adsorption system with 99% control efficiency for treatment before release to the atmosphere. Exhaust air from the blower and carbon adsorption system should be monitored for TVOC bi-weekly to check the performance of the carbon filter. The frequency of monitoring might be adjusted subject to review on site. The location of the exhaust of the carbon filter should be sited as far away as possible from the nearby ASRs.</p> <p>Spent activated carbon of the carbon adsorption system should be replaced at appropriate intervals such that the TVOC emission concentration from the system is acceptable (i.e. the measured TVOC concentration is below 20ppm).</p>							

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

Table A3.2 Implementation Schedule for Noise Measures

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S5.3.10	<p>Good Site Practice: Only well-maintained plant should be operated on-site and plant shall be serviced regularly during the decommissioning program. Silencers or mufflers on construction equipment should be utilized and shall be properly maintained during the decommissioning program. Mobile plant, if any, should be sited as far away from NSRs as possible. Machines and plant (such as trucks) that may be in intermittent use shall be shut down between works periods or should be throttled down to a minimum. Plant known to emit noise strongly in one direction shall, wherever possible, be orientated so that the noise is directed away from the nearby NSRs. Material stockpiles and other structures should be effectively utilized, wherever practicable, in screening noise from on-site decommissioning activities.</p>	Work sites / during decommissioning	Contractor				✓	EIAO-TM, NCO

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

Table A3.3 Implementation Schedule for Water Quality Measures

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S5.4	<p><u>Decontamination Processes</u></p> <p><u>Soil Excavation</u></p> <p>During excavation, all exposed pits shall be whenever possible backfilled immediately or covered. Where it is unavoidable to transiently pile up soils next to the excavation pit, the transient pile shall be bottom-lined, bunded and covered with impervious membrane during rain event in order to avoid generation of contaminated runoff.</p> <p>Final surfaces after excavation shall be well compacted and the subsequent permanent work or surface protection shall be carried out as soon as practical after the final surfaces are formed to prevent erosion caused by rainstorms. Appropriate intercepting channels and partial shelters shall be provided where necessary to prevent rainwater from collecting within trenches or footing excavations.</p>	Work site / During excavation	Contractor			✓		WPCO, TM-DSS

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S5.4	<p><u>Decontaminated Water and Wastewater from Wheel Washing</u></p> <p>During excavation, dump trucks or excavators shall be decontaminated before they leave the site to ensure that no contaminated earth, mud or debris is deposited by them on roads. A wheel washing bay shall be provided at every site exit that equipped with an adequately sized centralized wastewater treatment unit. The wastewater treatment unit shall deploy suitable treatment processes to settle out sands/ silts with contaminants cohered and remove other contaminants in wheel washes and decontamination water. The polluting parameters in effluent of the wastewater treatment unit shall be in compliance with the discharge standards stipulated in the TM-DSS before the effluent being discharged into the storm drains. The installation and operation of the wastewater treatment unit shall be licensed and subject to the effluent monitoring as required under the WPCO which is under the ambit of regional office (RO) of EPD. In any case, discharge of wheel wash water shall be minimized and recycled where possible. The selection of construction road between the wheel washing bay and the public road should be paved with backfill to reduce vehicle tracking of soil and to prevent surface runoff from entering public road drains.</p>	Work site / During excavation	Contractor					WPCO, TM-DSS

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S5.4	<p><u>Operation of Solidification / Stabilization Facility</u></p> <p>The solidification facility shall be sheltered and area of soil unloading / loading shall be provided with shed to avoid contaminated runoff. Excessive addition of water shall be avoided during the solidification process.</p> <p>Any pit used for solidification area shall be shallower than the water table to minimize the leaching of the contaminated soils. An impermeable membrane / sheet shall be placed at the bottom of any solidification pit during the solidification process.</p> <p>Any leachate generated from the solidification process shall be collected and treated in the centralized wastewater treatment unit before being discharged. The polluting parameters in effluent of the wastewater treatment unit shall be in compliance with the discharge standards stipulated in the TM-DSS before the effluent being discharged. The installation and operation of the wastewater treatment unit shall be licensed and subject to the effluent monitoring as required under the WPCO.</p>	Decontamination works area / During soil treatment	Contractor				✓	WPCO, TM-DSS

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S5.4	<p><u>Operation of Biopiling</u></p> <p>Impermeable liner shall be placed at the bottom of the biopiles and leachate collection sump shall be constructed along the perimeter of the biopiles to prevent leachate from contaminating the underlying soil/ groundwater. Concrete bund shall be constructed along the perimeter of biopiles to prevent the runoff coming out from the contaminated soil. Biopiles after formation and during rain shall be covered by anchored low permeability geotextiles to prevent contaminated runoff. It is proposed that the exposed biopile section at any time shall not be more than 5 m in length.</p> <p>All leachate generated from the operation of biopiling shall be collected and recycled to the biopile to avoid effluent discharge.</p>	Decontamination works area / During soil treatment	Contractor				✓	WPCO, TM-DSS
S5.4	<p><u>Groundwater Cleanup</u></p> <p>Floating oil/free product (of TPH) has only been found in the apron area of the Ex-GFS site. It is proposed that where free product is detected at the groundwater surface at excavated area, only the free product shall be skimmed off from the water surface. The skimmed free product shall be drummed properly and collected by a licensed chemical waste collector for disposal.</p>	Work site / During excavation	Contractor			✓		WPCO, TM-DSS Waste Disposal (Chemical Waste) (General) Regulation

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S5.4	<p>TPH Removal</p> <p>Petrol interceptor should be adopted, where appropriate, as the first tier of treatment to removal TPH contaminant from contaminated runoff and effluent discharge from the decontamination works area.</p>	Work site / During the decommissioning, excavation and soil treatment	Contractor	✓	✓	✓	✓	WPCO, TM-DSS
S5.4	<p>Failure of Centralized Wastewater Treatment Unit</p> <p>In the event of wastewater treatment unit failure, all decontamination activities should be ceased to avoid emergency discharge.</p>	Work site / During the decommissioning, excavation and soil treatment	Contractor	✓	✓	✓	✓	WPCO, TM-DSS
S5.4	<p>Building Demolition</p> <p>The site practices outlined in ProPECC PN 1/94 “<i>Construction Site Drainage</i>” should be followed as far as practicable in order to minimise surface runoff and the chance of erosion.</p>	Work sites / during decommissioning	Contractor				✓	EIAO-TM, WPCO, ProPECC PN 1/94
S5.4	<p>There is a need to apply to EPD for a discharge licence under the WPCO for discharging effluent from the construction site. The discharge quality is required to meet the requirements specified in the discharge licence. All the runoff, wastewater or extracted groundwater generated from the works areas should be treated so that it satisfies all the standards listed in the TM-DSS. It is anticipated that the wastewater generated from the works areas would be of small quantity. Monitoring of the treated effluent quality from the works areas should be carried out in accordance with the WPCO license which is under the ambit of regional office (RO) of EPD.</p>	Work sites / during decommissioning	Contractor				✓	EIAO-TM, WPCO, TM-DSS

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S5.4	Sewage from Workforce Temporary sanitary facilities, such as portable chemical toilets, should be employed on-site where necessary to handle sewage from the workforce. A licensed contractor would be responsible for appropriate disposal of waste matter and maintenance of these facilities.	Work sites / during decommissioning	Contractor				✓	EIAO-TM, WPCO
S5.4	Solid Waste and Accidental Spillage Debris and refuse generated on-site should be collected, handled and disposed of properly to avoid entering into the adjacent harbour waters. Stockpiles of cement and other construction materials should be kept covered when not being used.	Work sites / during decommissioning	Contractor				✓	EIAO-TM, WPCO, WDO
S5.4	Oils and fuels should only be used and stored in designated areas which have pollution prevention facilities. To prevent spillage of fuels and solvents to the nearby harbour waters, all fuel tanks and storage areas should be provided with locks and be sited on sealed areas, within bunds of a capacity equal to 110% of the storage capacity of the largest tank. The bund should be drained of rainwater after a rain event.	Work sites / during decommissioning	Contractor				✓	EIAO-TM, WPCO, WDO

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Table A3.4 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	Dec	
S5.5	<p>Good Site Practices</p> <p>It is not anticipated that adverse waste management related impacts would arise, provided that good site practices are adhered to. Recommendations for good site practices during decommissioning activities include:</p> <ul style="list-style-type: none"> 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 Training of site personnel in proper waste management and chemical waste handling procedures Provision of sufficient waste disposal points and regular collection for disposal Appropriate measures to minimise windblown litter and dust during transportation of waste by either covering trucks or by transporting wastes in enclosed containers A recording system for the amount of wastes generated, recycled and disposed of (including the disposal sites) 	Work sites / during decommissioning	Contractor					EIAO-TM

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S5.5	<p>Waste Reduction Measures</p> <p>Good management and control can prevent the generation of a significant amount of waste. Waste reduction is best achieved at the planning and design stage, as well as by ensuring the implementation of good site practices. Recommendations to achieve waste reduction include:</p> <ul style="list-style-type: none"> Sort C&D waste from demolition of the remaining structures to recover recyclable portions such as metals Segregation and storage of different types of waste in different containers, skips or stockpiles to enhance reuse or recycling of materials and their proper disposal Encourage collection of aluminium cans, PET bottles and paper by providing separate labelled bins to enable these wastes to be segregated from other general refuse generated by the work force Any unused chemicals or those with remaining functional capacity should be recycled Proper storage and site practices to minimise the potential for damage or contamination of construction materials 	Work sites / during decommissioning	Contractor					EIAO-TM

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S5.5	<p>Construction and Demolition Material Mitigation measures and good site practices should be incorporated into the contract document to control potential environmental impact from handling and transportation of C&D material. The mitigation measures include:</p> <p>Where it is unavoidable to have transient stockpiles of C&D material within the work site pending collection for disposal, the transient stockpiles shall be located away from waterfront or storm drains as far as possible</p> <p>Open stockpiles of construction materials or construction wastes on-site should be covered with tarpaulin or similar fabric</p> <p>Skip hoist for material transport should be totally enclosed by impervious sheeting</p> <p>Every vehicle should be washed to remove any dusty materials from its body and wheels before leaving a construction site</p> <p>The area where vehicle washing takes place and the section of the road between the washing facilities and the exit point should be paved with concrete, bituminous materials or hardcores</p> <p>The load of dusty materials carried by vehicle leaving a construction site should be covered entirely by clean impervious sheeting to ensure dusty materials do not leak from the vehicle</p> <p>All dusty materials should be sprayed with water prior to any loading, unloading or transfer operation so as to maintain the dusty materials wet</p> <p>The height from which excavated materials are dropped should be controlled to a minimum practical height to limit fugitive dust generation from unloading</p>	Work sites / during decommissioning	Contractor					ETWB TCW No. 33/2002, 31/2004, 19/2005

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
	When delivering inert C&D material to public fill reception facilities, the material should consist entirely of inert construction waste and of size less than 250mm or other sizes as agreed with the Secretary of the Public Fill Committee. In order to monitor the disposal of the surplus C&D material at the designed public fill reception facility and to control fly tipping, a trip-ticket system as stipulated in the ETWB TCW No. 31/2004 "Trip Ticket System for Disposal of Construction and Demolition Materials" should be included as one of the contractual requirements and implemented by an Environmental Team undertaking the Environmental Monitoring and Audit work. An Independent Environmental Checker should be responsible for auditing the results of the system.	Work site / during decommissioning	Contractor and Independent Environmental Checker					ETWB TCW No. 31/2004
S5.5	Chemical Waste After use, chemical wastes (for example, cleaning fluids, solvents, lubrication oil and fuel) should be handled according to the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes. Spent chemicals should be collected by a licensed collector for disposal at the CWTF or other licensed facility, in accordance with the <i>Waste Disposal (Chemical Waste) (General) Regulation</i>	Work sites / during decommissioning	Contractor					Waste Disposal (Chemical Waste) (General) Regulation Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S5.5	<p>General Refuse</p> <p>General refuse should be stored in enclosed bins or compaction units separate from C&D material. A licensed waste collector should be employed by the contractor to remove general refuse from the site, separately from C&D material. Effective collection and storage methods (including enclosed and covered area) of site wastes would be required to prevent waste materials from being blown around by wind, wastewater discharge by flushing or leaching into the marine environment, or creating odour nuisance or pest and vermin problem</p>	Work sites / during decommissioning	Contractor					<p>Waste Disposal Ordinance</p> <p>Water Pollution Control Ordinance</p>

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Table A3.5 Implementation Schedule for Land Contamination Measures

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S5.6.96	<p>For any excavation works conducted at Radar Station and ex-GFS building,</p> <p>As the risk due to dermal contact with groundwater by site workers is uncertain, it is recommended that personnel protective equipment (PPE) be used by site workers as a mitigation measure.</p>	Radar Station and ex-GFS building	Contractor					
S5.6.35, S5.6.51 to S5.6.60	<p>For ex-GFS building, the following environmental mitigation measures are proposed during the course of the site remediation in order to minimise the potential adverse environmental impacts arising from the handling of potentially contaminated materials:</p> <p><u>Excavation and decontamination works</u></p> <p>Personal protective equipment (PPE) should be used by site workers during soil excavation.</p> <p>All contaminated soil within the ex-GFS building should be excavated and treated on-site at a centralized decontamination works area located at the northern part of the south apron</p> <p>After excavation, confirmation sampling and testing should be conducted to ensure complete excavation of contaminated soils</p> <p>Contaminated soil should be sorted and handled with</p>	<p>Excavation zones/ During excavation</p> <p>Excavation zones/ During excavation</p> <p>Excavation zones/ During excavation</p> <p>Excavation zones/ During excavation</p>	Contractor Contractor Contractor Contractor					

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S5.6.94	<p>respect of their contamination</p> <p>Health and safety plan for excavation should be followed</p> <p>The following remediation processes should be applied for different types of soil contamination</p> <ul style="list-style-type: none"> - Biopiling for TPH/SVOCs contamination - Solidification / stabilization for metal contamination <p><u>Excavation and Transportation</u></p> <p>Excavation profiles must be properly designed and executed.</p> <p>Stockpiling site(s) should be lined with impermeable sheeting and banded. Stockpiles should be fully covered by impermeable sheeting to reduce dust emission. If this is not practicable due to frequent usage, regular watering should be applied. However, watering should be avoided on stockpiles of contaminated soil to minimise contaminated runoff.</p> <p>Stockpiles of contaminated soil should be properly covered by impermeable sheeting to minimise contaminated runoff from the stockpiles.</p> <p>Excavation and stockpiling should be carried out during dry season as far as possible to minimise contaminated runoff from contaminated soils.</p> <p>Supply of suitable clean backfill material is needed</p>	<p>Excavation zones/ During excavation</p> <p>Decontamination works area/ During excavation</p> <p>Excavation zones and decontamination works area/ During excavation and soil treatment</p>	<p>Contractor</p> <p>Contractor</p> <p>Contractor</p>					<p>Occupational Safety & Health Ordinance</p> <ul style="list-style-type: none"> • Waste Disposal Ordinance • Waste Disposal (Chemical Waste) (General) Regulation • Water Pollution Control Ordinance • Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S.5.6.94	<p>after excavation.</p> <p>Vehicles containing any excavated materials should be suitably covered to limit potential dust emissions or contaminated wastewater run-off, and truck bodies and tailgates should be sealed to prevent any discharge during the transportation or during wet conditions.</p> <p>Speed control for the trucks carrying contaminated materials should be enforced;</p> <p>Vehicle wheel and body washing facilities at the site's exist points should be established and used.</p> <p><u>Biopiling</u></p> <p>To avoid fugitive emissions of dust or any air pollutants from the biopile(s) and to minimise runoff from the stockpiled soils, the stockpiled soils at the biopiles should be covered by impermeable sheeting such that not longer than 5m of the biopile is exposed to open air.</p> <p>Upon formation of a biopile, the biopile should be fully covered by impermeable sheeting to prevent dust emission and runoff.</p> <p>Impermeable sheeting should be placed at the bottom of the biopiles and leachate collection sump should be constructed along the perimeter of the biopiles to prevent leachate from contaminating the underlying soil/groundwater. The collected leachate should be discharged following the requirements of Water</p>	<p>Excavation zones and decontamination works area/ During excavation and soil treatment</p>	Contractor					

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S5.6.94	<p>Pollution Control Ordinance (WPCO).</p> <p>The vented air from the biopile(s) should be connected to blower and carbon adsorption system with at least 99% control efficiency for treatment before release to the atmosphere. Exhaust air from the blower and carbon adsorption system should be monitored for TVOCs biweekly to check the performance of the carbon filter. The frequency of monitoring might be adjusted, subject to review on site.</p> <p>The biopiles should be fully covered by impermeable sheeting to control the extraction of VOCs.</p> <p>Spent activated carbon of the carbon adsorption system should be replaced at appropriate intervals such that the TVOC emission concentration from the system is acceptable (i.e. the measured TVOC concentration is below 20 ppm).</p> <p>Silencers should be installed at the biopile blowers to minimise noise impact.</p> <p>Contaminated runoff from biopile(s) should be prevented by constructing concrete bunds along the perimeter of the biopiles.</p> <p><u>Solidification / Stabilization</u></p> <p>The loading, unloading, handling, transfer and storage of cement should be carried out in an enclosed system.</p> <p>Mixing process and other associated material handling</p>	Excavation zones and decontamination works area/ During excavation and soil treatment	Contractor					

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S5.6.95	<p>activities should be properly scheduled to minimise potential noise impact.</p> <p>Mixing of contaminated soils with cement / water / other additive(s) should be undertaken at a solidification plant to minimise the potential for leaching.</p> <p>Runoff from the solidification / stabilization area should be prevented by constructing concrete bunds along the perimeter.</p> <p>In order to minimise the potential adverse effects on health and safety of construction workers during the course of site remediation, the Occupational Safety and Health Ordinance (OSHO) Chapter 509, and its subsidiary Regulations should be followed by all site personnel working on the site at all times. In addition, the following basic health and safety measures should be implemented as far as possible:</p> <ul style="list-style-type: none"> Set up a list of safety measures for site workers; Provide written information and training on safety for site workers; Keep a log-book and plan showing the contaminated zones and clean zones; Maintain a hygienic working environment; Avoid dust generation; Provide face and respiratory protection gear to site 	<p>Excavation zones and decontamination works area/ During excavation and soil treatment</p>	<p>Contractor</p>					<p>Occupational Safety and Health Ordinance, Chapter 509 and its subsidiary Regulations.</p>

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S5.6.97	<p>workers;</p> <p>Provide personal protective clothing (e.g. chemical resistant jackboot, liquid tight gloves) to site workers; and</p> <p>Provide first aid training and materials to site workers.</p> <p>For the remaining areas with potential land contamination concerns in ex-GFS building and Radar Station,</p> <p>A supplementary land contamination assessment shall be carried out upon the cessation of the operations and prior to the redevelopment, following the approved supplementary sampling plan in the respective CAR and/ or RAP of Radar Station and ex-GFS building in the EIA Report.</p> <p>Supplementary CAR(s) and if necessary RAP(s) shall be prepared. If contamination is identified in the supplementary site investigation, remediation shall be performed according to the supplementary CAR/RAP upon EPD's approval.</p>	Ex-GFS building and Radar Station	CEDD					<p>the Practice Note for Professional Persons ProPECC PN3/94</p> <p>“Contaminated Land Assessment and Remediation” and “Guidance Notes for Investigation and Remediation of Contaminated Sites of Petrol Filling Stations, Boatyards and Car Repair /Dismantling Workshop”</p>

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

Appendix A4

Implementation Schedule of the Recommended Mitigation Measures for KTD Schedule 3 EIA

Table A4.1 Implementation Schedule for Air Quality Measures for Schedule 3 EIA

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S6.5	8 times daily watering of the work site with active dust emitting activities.	Work site / during construction	Contractor		✓			EIAO-TM
S6.8	<p>Implementation of dust suppression measures stipulated in Air Pollution Control (Construction Dust) Regulation. The following mitigation measures, good site practices and a comprehensive dust monitoring and audit programme are recommended to minimize cumulative dust impacts.</p> <ul style="list-style-type: none"> • Stockpiling site(s) should be lined with impermeable sheeting and banded. Stockpiles should be fully covered by impermeable sheeting to reduce dust emission. • Misting for the dusty material should be carried out before being loaded into the vehicle. • Any vehicle with an open load carrying area should have properly fitted side and tail boards. • Material having the potential to create dust should not be loaded from a level higher than the side and tail boards and should be dampened and covered by a clean tarpaulin. • The tarpaulin should be properly secured and should extend at least 300 mm over the edges of the sides and tailboards. The material should also be dampened if necessary before transportation. • The vehicles should be restricted to maximum speed of 10 km per hour and confined haulage and delivery vehicle to designated roadways inside the site. On-site unpaved roads should be compacted and kept free of loose materials. • Vehicle washing facilities should be provided at every 	Work site / during construction	Contractor		✓			EIAO-TM, AQO

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S6.8	<p>vehicle exit point.</p> <ul style="list-style-type: none"> The area where vehicle washing takes place and the section of the road between the washing facilities and the exit point should be paved with concrete, bituminous materials or hardcores. Every main haul road should be sealed with concrete and kept clear of dusty materials or sprayed with water so as to maintain the entire road surface wet. Every stock of more than 20 bags of cement should be covered entirely by impervious sheeting placed in an area sheltered on the top and the three sides. Every vehicle should be washed to remove any dusty materials from its body and wheels before leaving the construction sites. 	Tourism Node / during design and operation	LandsD (on future land lease control)	✓		✓		EIAO-TM, AQO
S6.8	<ul style="list-style-type: none"> <u>DWFI compound for JVBC</u>: a DWFI compound is proposed at the downstream of JVC to contain pollution in drainage systems entering the KTAC and KTTS by interception facilities until the ultimate removal of the pollution sources. Tidal barriers and desilting facilities will form part of the compounds to prevent any accumulation of sediment within the downstream section of JVBC and hence fully mitigate the potential odour emissions from the headspace of JVBC near the existing discharge locations. The odour generating operations within the proposed desilting compound will be fully enclosed and the odorous air will be collected and treated by high 	KTAC & KTTS	DSD	✓		✓		EIAO-TM

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
	<p>efficiency deodorizers before discharge to the atmosphere.</p> <ul style="list-style-type: none"> Desilting compound for KTN: Two desilting compounds are proposed for KTN (at Site 1D6 and Site 1P1) to contain pollution in drainage systems entering the KTAC and KTTS by interception facilities until the ultimate removal of the pollution sources. Tidal barriers and desilting facilities will form part of the compounds to prevent any accumulation of sediment within the downstream section of KTN and hence fully mitigate the potential odour emissions from the headspace of KTN near the existing discharge locations. The odour generating operations within the proposed desilting compound will be fully enclosed and the odorous air will be collected and treated by high efficiency deodorizers before discharge to the atmosphere. Decking or reconstruction of KTN within apron area: it is proposed to deck the KTN or reconstruct the KTN within the former Apron area into Kai Tak River from the south of Road D1 to the north of Road D2 along the existing alignment of KTN. The Kai Tak River will compose of a number of channels flowing with non-odorous fresh water and THEES effluent. The channel flowing with THEES effluent will be designed with the width of water surface of not more than 16m. 	<p>KTN</p>	<p>CEDD (construction of desilting compounds at Site 1D6 and Site 1P1)</p> <p>DSD (construction of DWFI at Site 3A3)</p>	<p>✓</p> <p>✓</p>	<p>✓</p> <p>✓</p>	<p>✓</p> <p>✓</p>		
		<p>KTN</p>	<p>CEDD</p>	<p>✓</p>	<p>✓</p>			

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
	<ul style="list-style-type: none"> Localised maintenance dredging: Localised maintenance dredging should be conducted to provide water depth of not less than 3.5m over the whole of KTAC and KTTs. With reference to the water depth data recorded during the odour survey, only some of the areas in the northern part of KTAC (i.e. to the north of taxiway bridge) including the area near the northern edge of KTAC, the area near western bank of KTAC, and the area near the JVC discharge have water depths shallower than 3.5m. The area involved would be about 40% of the northern KTAC and the dredging depth required would be from about 2.7m to less than 1m. The maintenance dredging to be carried out prior to the occupation of any new development in the immediate vicinity of KTAC to avoid potential localized odour impacts at the future ASRs during the maintenance dredging operation. 	KTAC	CEDD	✓	✓			
	<ul style="list-style-type: none"> Improvement of water circulation in KTAC and KTTs: 600m gap opening at the northern part of the former Kai Tak runway, the water circulation in KTAC and KTTs would be substantially improved. Together with the improvement in water circulation, the DO level in KTAC and KTTs would also be increased. In-situ sediment treatment by bioremediation: Bioremediation would be applied to the entire KTAC and KTTs. 	KTAC KTAC & KTTs	CEDD CEDD	✓ ✓	✓ ✓			
S6.8	<ul style="list-style-type: none"> Odour mitigation measures for PS6: Proper enclosure and ventilation system to divert the odour emissions to deodorizer for treatment before discharge to environment. 	PS6 / during design and operation	CEDD/DSD	✓		✓	EIAO-TM	

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S6.8	<ul style="list-style-type: none"> • <u>Odour mitigation measures for box culvert maintenance:</u> 1) During the maintenance process, there is a potential for release of odorous gas due to disturbance of the sediments. A temporary shed will be provided at the maintenance opening and the odour impacts could be reduced by extracting the air through portable odour control equipment; 2) Sediments with odorous emission should be carried by vehicles with closed container to minimise odour impact during transportation; 3) The material temporarily stockpiled along the maintenance access road next to the box culvert should be properly covered. 	Box culvert in KTD / during maintenance	DSD		✓		EIAO-TM	

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

Table A4.2 Implementation Schedule for Noise Measures for Schedule 3 EIA

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S7.8	Use of quiet PME, movable barriers barrier for Asphalt Paver, Breaker, Excavator and Hand-held breaker and full enclosure for Air Compressor, Bar Bender, Concrete Pump, Generator and Water Pump	Work Sites / Construction Period	CEDD and its contractors and proponents of the various other projects (SCL, CKR, etc) and their contractors		✓			EIAO-TM, NCO
S7.9	<p>Good Site Practice:</p> <ul style="list-style-type: none"> Only well-maintained plant should be operated on-site and plant should be serviced regularly during the construction program. Silencers or mufflers on construction equipment should be utilized and should be properly maintained during the construction program. Mobile plant, if any, should be sited as far away from NSRs as possible. Machines and plant (such as trucks) that may be in intermittent use should be shut down between works periods or should be throttled down to a minimum. 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. Material stockpiles and other structures should be effectively utilized, wherever practicable, in screening noise from on-site construction activities. 	Work Sites / Construction Period	CEDD and its contractors and proponents of the various other projects (SCL, CKR, etc) and their contractors		✓			EIAO-TM, NCO

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S7.9	Scheduling of Construction Works during School Examination Period	Construction site near to school / Examination Period	CEDD and its contractors and project proponents of the various other projects (SCL, CKR, etc) and their contractors	✓				EIAO-TM, NCO
S7.8	(i) Provision of low noise surfacing in a section of Road L2; and	(i) Road L2 in front of Site 1B / before occupation of Site 1B (Figure 2.3)	CEDD	✓				EIAO-TM
	(ii) Provision of structural fins	(ii) Next to the sensitive façade of the affected dwellings in Site 1B / design stage of development	Housing Department	✓				
S7.8	(i) Avoid the sensitive façade of class room facing Road L2 and L4; and	(i) Site 1B2 to 1B4 / design stage	ArchSD	✓				
	(ii) Provision of low noise surfacing in a section of Road L2 & L4	(ii) Road L2 in front of Site 1B and Road L4 / before occupation of Site 1B2 to 1B4 (Figure 2.3)	CEDD	✓				

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S7.8	(i) Provision of low noise surfacing in a section of Road L4 before occupation of Site 111; and	(i) Road L4 in front of Site 111 / before occupation of Site 111 (Figure 2.3)	CEDD	✓				EIAO-TM
	(ii) Setback of building about 5m from site boundary.	(ii) Site 111 / Design Stage of development	LandsD / Future developer					
S7.8	Setback of building about 35m to the northwest direction at 1L3 and 5m at Site 1L2.	Site 1L2 and 1L3 / Design stage of development	LandsD / Future developer	✓				EIAO-TM
S7.8	(i) avoid any sensitive façades with openable window facing the existing Kowloon City Road network; and (ii) for the sensitive façades facing the To Kwa Wan direction, either setback the façades by about 5m to the northeast direction or do not provide the façades with openable window.	Site 2B6 / Design stage of development (Figure 2.3)	LandsD / Future developer	✓				EIAO-TM
S7.8	(i) avoid any sensitive façades with openable window facing the existing To Kwa Wan Road or	Site 5A4 / Design stage of development (Figure 2.3)	LandsD / Future developer	✓				EIAO-TM
	(ii) provision of 17.5m high noise tolerant building fronting To Kwa Wan Road and restrict the height of the residential block(s) located at less than 55m away from To Kwa Wan Road to no more than 25m above ground.							
S7.8	(i) avoid any sensitive façades with openable window facing the slip road connecting Prince Edward Road East and San Po Kong or other alternative mitigation measures and at-source mitigation measures for the surrounding new local roads to minimise the potential traffic noise impacts from the slip road	Ex-San Po Kong Flatted Factory / Design stage of development (Figure 2.3)	Housing Department	✓				EIAO-TM

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S7.8	All the ventilation fans installed in the below will be provided with silencers or acoustics treatment. (i) SPS (ii) ESS (iii) Tunnel Ventilation Shaft (iv) EFTS depot	(i) PS6 (ii) All ESS (iii) SCL, CKR & T2 Tunnel (iv) EFTS depot	(i) CEDD (ii) CLP Power Hong Kong Limited (iii) Project Proponent of SCL, CKR and T2 Tunnel (iv) Project Proponent of EFTS depot	✓	✓	✓		EIAO-TM, NCO
S7.8	Installation of retractable roof or other equivalent measures	Main stadium / Design stage of main stadium	Project proponent of main stadium	✓				EIAO-TM

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

Table A4.3 Implementation Schedule for Water Quality Measures for Schedule 3 EIA

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S8.8	<p>Operational Phase Cleansing contractor provides scavenging service (floating refuse) in the waters surrounding the ex-Kai Tak Airport runway except the inaccessible water area located to the northwest of the footbridge connecting the runway and Kwun Tong Typhoon Shelter.</p> <p>The following mitigation measures are proposed to be incorporated in the design of the SPS at KTD, including:</p> <ul style="list-style-type: none"> Dual power supply or emergency generator should be provided at all the SPSs to secure electrical power supply; Standby pumps should be provided at all SPSs to ensure smooth operation of the SPS during maintenance of the duty pumps; An alarm should be installed to signal emergency high water level in the wet well at all SPSs; and For all unmanned SPSs, a remote monitor system connecting SPSs with the control station through telemetry system should be provided so that swift actions could be taken in case of malfunction of unmanned facilities. 	KTD / during operational stage	MD			✓	EIAO-TM, WPCO, WDO	
S8.8	<p>The following mitigation measures are proposed to be incorporated in the design of the SPS at KTD, including:</p> <ul style="list-style-type: none"> Dual power supply or emergency generator should be provided at all the SPSs to secure electrical power supply; Standby pumps should be provided at all SPSs to ensure smooth operation of the SPS during maintenance of the duty pumps; An alarm should be installed to signal emergency high water level in the wet well at all SPSs; and For all unmanned SPSs, a remote monitor system connecting SPSs with the control station through telemetry system should be provided so that swift actions could be taken in case of malfunction of unmanned facilities. 	PS1, PS1A, PS2, PS3, SPS at Site 5A1 and PS6	CEDD/DSD	✓		✓	EIAO-TM, WPCO	
S8.8	<p>For the operation of road works, a surface water drainage system should be provided to collect road runoff. It is recommended that the road drainage should be provided with adequately designed silt trap and oil interceptors, as necessary. The design of the operational stage mitigation measures for the road works shall take into account the guidelines published in ProPECC PN 5/93 "Drainage Plans subject to Comment by the EPD".</p>	Project site / during design and operational stages	CEDD HyD			✓	EIAO-TM, WPCO, ProPECC PN 5/93	

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S8.9	<p>The following monitoring programmes shall be implemented:</p> <ul style="list-style-type: none"> Marine water quality monitoring and audit programme before and after opening a 600 m gap at the runway; Red tide monitoring programme and action plan during Project operation. 	Project site / before construction of the Project and during operational phase of the Project (with the 600 m opening)	CEDD	✓	✓			EIAO-TM, WPCO
S8.8	<p>Construction Phase <u>Marine-based Construction</u> <i>Capital and Maintenance Dredging for Cruise Terminal</i></p> <p>Mitigation measures for construction of the proposed cruise terminal should follow those recommended in the approved EIA for CT Dredging.</p>	Work Sites/ during construction phase	Contractor	✓				EIAO-TM, WPCO
S8.8	<p><i>Fireboat Berth, Runway Opening and Road T2</i></p> <p>Silt curtains should be deployed around the close grab dredger to minimize release of sediment and other contaminants for any dredging and filling activities in open water.</p>	Work Sites/ during construction phase	Contractor	✓				EIAO-TM, WPCO
S8.8	<p>Dredging at and near the seawall area for construction of the public landing steps cum fireboat berth should be carried out at a maximum production rate of 1,000m³ per day using one grab dredger.</p>	Work Sites/ during construction phase	Contractor	✓				EIAO-TM, WPCO

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S8.8	The proposed construction method for runway opening should adopt an approach where the existing seawall at the runway will not be removed until completion of all excavation and dredging works for demolition of the runway. Thus, excavation of bulk fill and majority of the dredging works will be carried out behind the existing seawall, and the sediment plume can be effectively contained within the works area. As there is likely some accumulation of sediments alongside the runway, there will be a need to dredge the existing seabed after completion of all the demolition works. Dredging alongside the 600m opening should be carried out at a maximum production rate of 2,000m ³ per day using one grab dredger.	Work Sites/ during construction phase	Contractor		✓			EIAO-TM, WPCO
S8.8	Dredging for Road T2 should be conducted at a maximum rate of 8,000m ³ per day (using four grab dredgers) whereas the sand filling should be conducted at a maximum rate of 2,000m ³ per day (using two grab dredgers).	Work Sites/ during construction phase	Contractor		✓			EIAO-TM, WPCO
S8.8	Silt screens shall be applied to seawater intakes at WSD seawater intake.	Cha Kwo Ling, Sai Wan Ho, Quarry Bay, Sheung Wan, Wan Chai and Tai Wan / during construction phase	Contractor		✓			EIAO-TM, WPCO

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S8.8	<p><u>Land-based Construction</u></p> <p><i>Construction Runoff</i></p> <p>Exposed soil areas should be minimised to reduce the potential for increased siltation, contamination of runoff, and erosion. Construction runoff related impacts associated with the above ground construction activities can be readily controlled through the use of appropriate mitigation measures which include:</p> <ul style="list-style-type: none"> • use of sediment traps • adequate maintenance of drainage systems to prevent flooding and overflow 	Work Sites / during construction	Contractor		✓			EIAO-TM, WPCO, ProPECC PN 1/94
S8.8	<p>Construction site should be provided with adequately designed perimeter channel and pre-treatment facilities and proper maintenance. The boundaries of critical areas of earthworks should be marked and surrounded by dykes or embankments for flood protection. Temporary ditches should be provided to facilitate runoff discharge into the appropriate watercourses, via a silt retention pond. Permanent drainage channels should incorporate sediment basins or traps and baffles to enhance deposition rates. The design of efficient silt removal facilities should be based on the guidelines in Appendix A1 of ProPECC PN 1/94.</p>	Work Sites / during construction	Contractor		✓			EIAO-TM, WPCO, ProPECC PN 1/94

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S8.8	Ideally, construction works should be programmed to minimise surface excavation works during the rainy season (April to September). All exposed earth areas should be completed as soon as possible after earthworks have been completed, or alternatively, within 14 days of the cessation of earthworks where practicable. If excavation of soil cannot be avoided during the rainy season, or at any time of year when rainstorms are likely, exposed slope surfaces should be covered by tarpaulin or other means.	Work Sites / during construction	Contractor		✓			EIAO-TM, WPCO, ProPECC PN 1/94
S8.8	Sediment tanks of sufficient capacity, constructed from pre-formed individual cells of approximately 6 to 8 m ³ capacity, are recommended as a general mitigation measure which can be used for settling surface runoff prior to disposal. The system capacity is flexible and able to handle multiple inputs from a variety of sources and particularly suited to applications where the influent is pumped.	Work Sites / during construction	Contractor		✓			EIAO-TM, WPCO, ProPECC PN 1/94
S8.8	Open stockpiles of construction materials (for examples, aggregates, sand and fill material) of more than 50 m ³ should be covered with tarpaulin or similar fabric during rainstorms. Measures should be taken to prevent the washing away of construction materials, soil, silt or debris into any drainage system.	Work Sites / during construction	Contractor		✓			EIAO-TM, WPCO, ProPECC PN 1/94
S8.8	Manholes (including newly constructed ones) should always be adequately covered and temporarily sealed so as to prevent silt, construction materials or debris being washed into the drainage system and storm runoff being directed into foul sewers.	Work Sites / during construction	Contractor		✓			EIAO-TM, WPCO, ProPECC PN 1/94

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S8.8	Precautions to be taken at any time of year when rainstorms are likely, actions to be taken when a rainstorm is imminent or forecast, and actions to be taken during or after rainstorms are summarised in Appendix A2 of ProPECC PN 1/94. Particular attention should be paid to the control of silty surface runoff during storm events.	Work Sites / during construction	Contractor		✓			EIAO-TM, WPCO, ProPECC PN 1/94
S8.8	Oil interceptors should be provided in the drainage system and regularly cleaned to prevent the release of oils and grease into the storm water drainage system after accidental spillages. The interceptor should have a bypass to prevent flushing during periods of heavy rain.	Work Sites / during construction	Contractor		✓			EIAO-TM, WPCO, ProPECC PN 1/94
S8.8	All vehicles and plant should be cleaned before leaving a construction site to ensure no earth, mud, debris and the like is deposited by them on roads. An adequately designed and located wheel washing bay should be provided at every site exit, and wash-water should have sand and silt settled out and removed at least on a weekly basis to ensure the continued efficiency of the process. The section of access road leading to, and exiting from, the wheel-wash bay to the public road should be paved with sufficient backfall toward the wheel-wash bay to prevent vehicle tracking of soil and silty water to public roads and drains.	Work Sites / during construction	Contractor		✓			EIAO-TM, WPCO, ProPECC PN 1/94
S8.8	<i>Drainage</i> It is recommended that on-site drainage system should be installed prior to the commencement of other construction activities. Sediment traps should be installed in order to minimise the sediment loading of the effluent prior to discharge into foul sewers. There should be no direct discharge of effluent from the site into the sea.	Work Sites / during construction	Contractor		✓			EIAO-TM, WPCO, ProPECC PN 1/94

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S8.8	All temporary and permanent drainage pipes and culverts provided to facilitate runoff discharge should be adequately designed for the controlled release of storm flows. All sediment control measures should be regularly inspected and maintained to ensure proper and efficient operation at all times and particularly following rain storms. The temporarily diverted drainage should be reinstated to its original condition when the construction work has finished or the temporary diversion is no longer required.	Work Sites / during construction	Contractor		✓			EIAO-TM, WPCO, ProPECC PN 1/94
S8.8	All fuel tanks and storage areas should be provided with locks and be located on sealed areas, within bunds of a capacity equal to 110% of the storage capacity of the largest tank, to prevent spilled fuel oils from reaching the coastal waters of the Victoria Harbour WCZ.	Work Sites / during construction	Contractor		✓			EIAO-TM, WPCO, ProPECC PN 1/94, WDO
S8.8	<i>Sewage Effluent</i> Construction work force sewage discharges on site are expected to be connected to the existing trunk sewer or sewage treatment facilities. The construction sewage may need to be handled by portable chemical toilets prior to the commission of the on-site sewer system. Appropriate numbers of portable toilets should be provided by a licensed contractor to serve the large number of construction workers over the construction site. The Contractor should also be responsible for waste disposal and maintenance practices.	Work Sites / during construction	Contractor		✓			EIAO-TM, WPCO
S8.8	<i>Stormwater Discharges</i> Minimum distances of 100 m should be maintained between the existing or planned stormwater discharges and the existing or planned seawater intakes	Work Sites / during construction	Contractor		✓			EIAO-TM, WPCO, TM-DSS

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S8.8	<i>Debris and Litter</i> In order to maintain water quality in acceptable conditions with regard to aesthetic quality, contractors should be required, under conditions of contract, to ensure that site management is optimised and that disposal of any solid materials, litter or wastes to marine waters does not occur <i>Construction Works at or in Close Proximity of Storm Culvert or Seafront</i>	Work Sites / during construction	Contractor	✓				EIAO-TM, WPCO, WDO
S8.8	The proposed works should preferably be carried out within the dry season where the flow in the drainage channel /storm culvert/ nullah is low.	Work Sites / during construction	Contractor	✓				EIAO-TM, WPCO
S8.8	The use of less or smaller construction plants may be specified to reduce the disturbance to the bottom sediment at the drainage channel /storm culvert / nullah.	Work Sites / during construction	Contractor	✓				EIAO-TM, WPCO
S8.8	Temporary storage of materials (e.g. equipment, filling materials, chemicals and fuel) and temporary stockpile of construction materials should be located well away from any water courses during carrying out of the construction works.	Work Sites / during construction	Contractor	✓				EIAO-TM, WPCO
S8.8	Stockpiling of construction materials and dusty materials should be covered and located away from any water courses.	Work Sites / during construction	Contractor	✓				EIAO-TM, WPCO
S8.8	Construction debris and spoil should be covered up and/or disposed of as soon as possible to avoid being washed into the nearby water receivers.	Work Sites / during construction	Contractor	✓				EIAO-TM, WPCO
S8.8	Construction activities, which generate large amount of wastewater, should be carried out in a distance away from the waterfront, where practicable.	Work Sites / during construction	Contractor	✓				EIAO-TM, WPCO

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S8.8	Mitigation measures to control site runoff from entering the nearby water environment should be implemented to minimize water quality impacts. Surface channels should be provided along the edge of the waterfront within the work sites to intercept the runoff.	Work Sites / during construction	Contractor		✓			EIAO-TM, WPCO
S8.8	Construction effluent, site run-off and sewage should be properly collected and/or treated.	Work Sites / during construction	Contractor		✓			EIAO-TM, WPCO
S8.8	Any works site inside the storm water courses should be temporarily isolated, such as by placing of sandbags or silt curtains with lead edge at bottom and properly supported props to prevent adverse impact on the storm water quality.	Work Sites / during construction	Contractor		✓			EIAO-TM, WPCO
S8.8	Silt curtain may be installed around the construction activities at the seafront to minimize the potential impacts due to accidental spillage of construction materials.	Work Sites / during construction	Contractor		✓			EIAO-TM, WPCO
S8.8	Proper shoring may need to be erected in order to prevent soil/mud from slipping into the storm culvert/drainage channel/sea.	Work Sites / during construction	Contractor		✓			EIAO-TM, WPCO
S8.8	Supervisory staff should be assigned to station on site to closely supervise and monitor the works	Work Sites / during construction	Contractor		✓			EIAO-TM, WPCO
S8.9	Marine water quality monitoring and audit programme shall be implemented for the proposed sediment treatment operation.	Project site / during the proposed sediment treatment operation	Contractor	✓				EIAO-TM, WPCO

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

Table A4.4 Implementation Schedule for Waste Management Measures for Schedule 3 EIA

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S9.5	<p>Good Site Practices</p> <p>It is not anticipated that adverse waste management related impacts would arise, provided that good site practices are adhered to. Recommendations for good site practices during construction activities include:</p> <ul style="list-style-type: none"> • 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 • Training of site personnel in proper waste management and chemical waste handling procedures • Provision of sufficient waste disposal points and regular collection for disposal • Appropriate measures to minimise windblown litter and dust during transportation of waste by either covering trucks or by transporting wastes in enclosed containers • A recording system for the amount of wastes generated, recycled and disposed of (including the disposal sites) 	Work Sites / during construction	Contractor		√			EIAO-TM

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S9.5	<p>Waste Reduction Measures</p> <p>Good management and control can prevent the generation of a significant amount of waste. Waste reduction is best achieved at the planning and design stage, as well as by ensuring the implementation of good site practices. Recommendations to achieve waste reduction include:</p> <ul style="list-style-type: none"> Sort C&D waste from demolition of the remaining structures to recover recyclable portions such as metals Segregation and storage of different types of waste in different containers, skips or stockpiles to enhance reuse or recycling of materials and their proper disposal Encourage collection of aluminium cans, PET bottles and paper by providing separate labelled bins to enable these wastes to be segregated from other general refuse generated by the work force Any unused chemicals or those with remaining functional capacity should be recycled Proper storage and site practices to minimise the potential for damage or contamination of construction materials 	Work Sites / during construction	Contractor	√				EIAO-TM
S9.5	<p>Dredged Marine Sediment</p> <p>The basic requirements and procedures for dredged mud disposal are specified under the ETWB TCW No. 34/2002. The management of the dredging, use and disposal of marine mud is monitored by the MFC, while the licensing of marine dumping is required under the Dumping at Sea Ordinance and is the responsibility of the Director of Environmental Protection (DEP)</p>	Work Sites / during construction	Contractor	√				ETWB TCW No. 34/2002

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S9.5	The dredged marine sediments would be loaded onto barges and transported to the designated disposal sites allocated by the MFC depending on their level of contamination. Sediment classified as Category L would be suitable for Type 1 - Open Sea Disposal. Contaminated sediment would require either Type 1 – Open Sea Disposal (Dedicated Sites), Type 2 - Confined Marine Disposal, or Type 3 – Special Treatment / Disposal and must be dredged and transported with great care in accordance with ETWB TCW No. 34/2002. Subject to the final allocation of the disposal sites by MFC, the dredged contaminated sediment must be effectively isolated from the environment and disposed properly at the designated disposal site	Work Sites / during construction	Contractor/ Project Proponent		√			ETWB TCW No. 34/2002

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S9.5	<p>It will be the responsibility of the contractor to satisfy the appropriate authorities that the contamination levels of the marine sediment to be dredged have been analysed and recorded. According to the ETWB TCW No. 34/2002, this will involve the submission of a formal Sediment Quality Report to the DEP, prior to the dredging contract being tendered. The contractor for the dredging works should apply for allocation of marine disposal sites and all necessary permits from relevant authorities for the disposal of dredged sediment. During transportation and disposal of the dredged marine sediments requiring Type 1, Type 2, or Type 3 disposal, the following measures should be taken to minimise potential impacts on water quality:</p> <ul style="list-style-type: none"> • Bottom opening of barges should be fitted with tight fitting seals to prevent leakage of material. Excess material should be cleaned from the decks and exposed fittings of barges and hopper dredgers before the vessel is moved • Monitoring of the barge loading should be conducted to ensure that loss of material does not take place during transportation. Transport barges or vessels should be equipped with automatic self-monitoring devices as required under the Dumping at Sea Ordinance and as specified by the DEP • Barges or hopper barges should not be filled to a level that would cause the overflow of materials or sediment laden water during loading or transportation 	Work Sites / during construction	Contractor	√				ETWB TCW No. 34/2002

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S9.5	<p>Construction and Demolition Material</p> <p>Mitigation measures and good site practices should be incorporated into contract document to control potential environmental impact from handling and transportation of C&D material. The mitigation measures include:</p> <ul style="list-style-type: none"> • Where it is unavoidable to have transient stockpiles of C&D material within the Project work site pending collection for disposal, the transient stockpiles should be located away from waterfront or storm drains as far as possible • Open stockpiles of construction materials or construction wastes on-site should be covered with tarpaulin or similar fabric • Skip hoist for material transport should be totally enclosed by impervious sheeting • Every vehicle should be washed to remove any dusty materials from its body and wheels before leaving a construction site • The area where vehicle washing takes place and the section of the road between the washing facilities and the exit point should be paved with concrete, bituminous materials or hardcores • The load of dusty materials carried by vehicle leaving a construction site should be covered entirely by clean impervious sheeting to ensure dust materials do not leak from the vehicle • All dusty materials should be sprayed with water prior to any loading, unloading or transfer operation so as to maintain the dusty materials wet • The height from which excavated materials are dropped should be controlled to a minimum practical height to limit fugitive dust generation from unloading 	Work Sites / during construction	Contractor		√			ETWB TCW No. 33/2002, 31/2004, 19/2005

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
	When delivering inert C&D material to public fill reception facilities, the material should consist entirely of inert construction waste and of size less than 250mm or other sizes as agreed with the Secretary of the Public Fill Committee. In order to monitor the disposal of the surplus C&D material at the designed public fill reception facility and to control fly tipping, a trip-ticket system as stipulated in the ETWB TCW No. 31/2004 "Trip Ticket System for Disposal of Construction and Demolition Materials" should be included as one of the contractual requirements and implemented by an Environmental Team undertaking the Environmental Monitoring and Audit work. An Independent Environmental Checker should be responsible for auditing the results of the system.	Work site / During the construction period	Contractor and Independent Environmental Checker		√			ETWB TCW No. 31/2004
S9.5	Chemical Waste After use, chemical wastes (for example, cleaning fluids, solvents, lubrication oil and fuel) should be handled according to the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes. Spent chemicals should be collected by a licensed collector for disposal at the CWTF or other licensed facility, in accordance with the <i>Waste Disposal (Chemical Waste) (General) Regulation</i>	Work Sites / during construction	Contractor		√			Waste Disposal (Chemical Waste) (General) Regulation Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S9.5	<p>General Refuse</p> <p>General refuse should be stored in enclosed bins or compaction units separate from C&D material. A licensed waste collector should be employed by the contractor to remove general refuse from the site, separately from C&D material. Effective collection and storage methods (including enclosed and covered area) of site wastes would be required to prevent waste materials from being blown around by wind, wastewater discharge by flushing or leaching into the marine environment, or creating odour nuisance or pest and vermin problem</p>	Work Sites / during construction	Contractor		√			<p>Waste Disposal Ordinance</p> <p>Water Pollution Control Ordinance</p>

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

Table A4.5 Implementation Schedule for Land Contamination Measures for Schedule 3 EIA

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S10.7.13	<p>EMSD Headquarters is currently occupied by EMSD as the headquarters which will continue for the near future and no decommissioning programme is anticipated at the moment.</p> <ul style="list-style-type: none"> EMSD as the current occupant of the EMSD Headquarters should conduct a land contamination assessment and complete the necessary remediation according to the relevant guidelines prior to handing over the site to the Government for redevelopment in the future. 	EMSD Headquarters	EMSD	√			√	<p>“Guidance Note for Contaminated Land Assessment and Remediation”</p> <p>“Guidance Manual for Use of Risk-based Remediation Goals for Contaminated Land Management</p> <p>“Guidance Notes for Investigation and Remediation of Contaminated Sites of Petrol Filling Stations, Boatyards and Car Repair /Dismantling Workshop”</p>
S10.8.2	<p>For any excavation works conducted at Radar Station and ex-GFS building,</p> <ul style="list-style-type: none"> As the risk due to dermal contact with groundwater by site workers is uncertain, it is recommended that appropriate personnel protective equipment (PPE) be used by site workers as a mitigation measure. 	Radar Station and ex-GFS building	Contractor			√		

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S10.8.2	<p>For ex-GFS building, the following environmental mitigation measures should be undertaken during the course of the site remediation in order to minimise the potentially adverse environmental impacts arising from the handling of potentially contaminated materials:</p> <p>Excavation and decontamination works</p> <ul style="list-style-type: none"> Personal protective equipment (PPE) should be used by site workers during soil excavation. All contaminated soil within the Study Area should be excavated and treated on-site at a centralized decontamination works area located at the northern part of the south apron After excavation, confirmation sampling and testing should be conducted to ensure complete excavation of contaminated soils Contaminated soil should be sorted and handled with respect of their contamination Health and safety plan for excavation should be followed The following remediation processes should be applied for different types of soil contamination <ul style="list-style-type: none"> Biopiling for TPH/SVOCs contamination Solidification / stabilization for metal contamination 	<p>Excavation zones/ During excavation</p> <p>Excavation zones/ During excavation</p> <p>Excavation zones/ During excavation</p> <p>Excavation zones/ During excavation</p> <p>Excavation zones/ During excavation</p> <p>Excavation zones/ During excavation</p> <p>Decontamination works area/ During excavation</p>	<p>Contractor</p> <p>Contractor</p> <p>Contractor</p> <p>Contractor</p> <p>Contractor</p> <p>Contractor</p>	<p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p>	<p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p>	<p>Waste Disposal Ordinance</p> <p>Waste Disposal (Chemical Waste) (General) Regulation</p> <p>Water Pollution Control Ordinance</p> <p>Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes</p> <p>Occupational Safety & Health Ordinance</p>		

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S10.8.2	<p><u>Excavation and Transportation</u></p> <ul style="list-style-type: none"> Excavation profiles should be properly designed and executed. Stockpiling site(s) should be lined with impermeable sheeting and banded. Stockpiles should be fully covered by impermeable sheeting to reduce dust emission. If this is not practicable due to frequent usage, regular watering should be applied. However, watering should be avoided on stockpiles of contaminated soil to minimize contaminated runoff. Stockpiles of contaminated soil should be properly covered by impermeable sheeting to minimize contaminated runoff from the stockpiles. Excavation and stockpiling should be carried out during dry season as far as possible to minimize contaminated runoff from contaminated soils. Supply of suitable clean backfill material is needed after excavation. Vehicles containing any excavated materials should be suitably covered to limit potential dust emissions or contaminated wastewater run-off, and truck bodies and tailgates should be sealed to prevent any discharge during the transportation or during wet conditions. Speed control for the trucks carrying contaminated materials should be enforced; 	Excavation zones and decontamination works area/ During excavation and soil treatment	Contractor	√			√	Waste Disposal Ordinance Waste Disposal (Chemical Waste) (General) Regulation Water Pollution Control Ordinance Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S10.8.2	<ul style="list-style-type: none"> Vehicle wheel and body washing facilities at the site's exist points should be established and used. <p><u>Biopiling</u></p> <ul style="list-style-type: none"> To avoid fugitive emissions of dust or any air pollutants from the biopile(s) and to minimise runoff from the stockpiled soils, the stockpiled soils at the biopiles should be covered by impermeable sheeting such that not longer than 5m of the biopile is exposed to open air. Upon formation of a biopile, the biopile should be fully covered by impermeable sheeting to prevent dust emission and runoff. Impermeable sheeting should be placed at the bottom of the biopiles and leachate collection sump should be constructed along the perimeter of the biopiles to prevent leachate from contaminating the underlying soil/groundwater. The collected leachate should be discharged following the requirements of Water Pollution Control Ordinance (WPCO). The vented air from the biopile(s) should be connected to blower and carbon adsorption system with at least 99% control efficiency for treatment before release to the atmosphere. Exhaust air from the blower and carbon adsorption system should be monitored for TVOCs biweekly to check the performance of the carbon filter. The frequency of monitoring might be adjusted subject to review on site. 	Excavation zones and decontamination works area/ During excavation and soil treatment	Contractor	√			√	

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S10.8.2	<ul style="list-style-type: none"> The biopiles should be fully covered by impermeable sheeting to control the extraction of VOCs. Spent activated carbon of the carbon adsorption system should be replaced at appropriate intervals such that the VOC emission concentration from the system is acceptable (i.e. the measured TVOC concentration is below 20 ppm). Silencers should be installed at the biopile blowers to minimise noise impact. Contaminated runoff from biopile(s) should be prevented by constructing concrete bunds along the perimeter of the biopiles. <p><u>Solidification / Stabilization</u></p> <ul style="list-style-type: none"> The loading, unloading, handling, transfer and storage of cement should be carried out in an enclosed system. Mixing process and other associated material handling activities should be properly scheduled to minimise potential noise impact. Mixing of contaminated soils with cement / water / other additive(s) should be undertaken at a solidification plant to minimise the potential for leaching. Runoff from the solidification / stabilization area should be prevented by constructing concrete bunds along the perimeter. 	Excavation zones and decontamination works area/ During excavation and soil treatment	Contractor	√			√	

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S10.8.2	<p>In order to minimise the potentially adverse effects on health and safety of construction workers during the course of site remediation, the Occupational Safety and Health Ordinance (OSHO) Chapter 509, and its subsidiary Regulations should be followed by all site personnel working non the site at all times. In addition, the following basic health and safety measures should be implemented as far as possible:</p> <ul style="list-style-type: none"> • Set up a list of safety measures for site workers; • Provide written information and training on safety for site workers; • Keep a log-book and plan showing the contaminated zones and clean zones; • Maintain a hygienic working environment; • Avoid dust generation; • Provide face and respiratory protection gear to site workers; • Provide personal protective clothing (e.g. chemical resistant jackboot, liquid tight gloves) to site workers; and • Provide first aid training and materials to site workers. 	Excavation zones and decontamination works area/ During excavation and soil treatment	Contractor	√			√	Occupational Safety and Health Ordinance, Chapter 509 and its subsidiary Regulations.
S10.8.2	For the remaining areas with potential land contamination concerns in ex-GFS building and Radar Station,	Ex-GFS building and Radar Station	CEDD	√			√	the Practice Note for Professional Persons ProPECC PN3/94

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
	<ul style="list-style-type: none"> A supplementary land contamination assessment was recommended to be carried out upon the cessation of the operations and prior to the redevelopment. A supplementary sampling plan providing the sampling and laboratory analysis information for further SI in these areas has been provided in respective CAR and/ or RAP of Radar Station and ex-GFS building. If contamination is identified in the supplementary site investigation, remediation should be performed according to the supplementary CAR/RAP upon EPD's approval. 						<p>"Contaminated Land Assessment and Remediation" and "Guidance Notes for Investigation and Remediation of Contaminated Sites of Petrol Filling Stations, Boatyards and Car Repair /Dismantling Workshop"</p>	
S10.8.3	<p>As precautionary measure to minimize any potential environmental impacts associated with the potential contaminative land in the areas outside the former Kai Tak Airport boundary but within the boundary of the KTD,</p> <ul style="list-style-type: none"> it is recommended that the current occupant(s) or future developer(s) of those identified hotspots should carry out detailed land contamination investigation prior to any redevelopment. If land contamination is confirmed, proper remedial measures should be formulated and implemented prior to the redevelopment of the respective site. 	Potential contaminative land uses outside the former Kai Tak Airport boundary but within the boundary of the KTD	Current occupant(s) or future developer(s)	√		√	<p>"Guidance Note for Contaminated Land Assessment and Remediation"</p> <p>"Guidance Manual for Use of Risk-based Remediation Goals for Contaminated Land Management"</p> <p>"Guidance Notes for Investigation and Remediation of Contaminated Sites of Petrol Filling Stations, Boatyards and Car Repair /Dismantling Workshop"</p>	

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Table A4.6 Implementation Schedule for Cultural Heritage Measures for Schedule 3 EIA

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*			Relevant Legislation and Guidelines
				Des	C	O	
S12.8	<p><u>Marine Archaeology</u>: It is recommended that the dredged spoil from those marine works that caused significant impact to the seabed should be monitored for the presence of archaeological material. Guidelines for the monitoring brief have been prepared in consultation with the AMO. A qualified marine archaeologist needs to be on standby to provide specialist advice, if required, but the monitoring can be carried out by a member of staff on the dredging barge. Marine works in KTD that may cause significant impact to the seabed include the dredging works for the immersed tunnel section of CKR at To Kwa Wan, dredging works for the relocation of the Hong Kong China Gas (HKCG) submarine main, dredging works for the proposed cruise terminal, and dredging works for the immersed tunnel section of Road T2 (including the dredging required for the associated reconstruction of a section of the existing Kwun Tong submarine outfall). Details of the impacts and the recommended mitigation measures for the dredging works for proposed cruise terminal are presented in the corresponding approved EIA Report (EIAO Register No.: AEIAR-115/2007). Whereas the impacts and mitigation measures required for CKR, HKCG submarine main relocation, and Road T2 will be examined under the respective Schedule 2 EIA study.</p>	Dredging areas / during dredging operation	Contractor		✓		None

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S12.8	<p>Terrestrial Archaeology: Mitigation in the form of further archaeological investigation and rescue excavation will be required for Trench AA3 and further archaeological investigation and preservation <i>in situ</i> will be required for the extant sections of the Longjin Pier identified in Trench AA5. The full scope and methodology of the further investigations should be submitted and agreed with AMO prior to the investigation.</p> <p>All identified sections of the Longjin Pier should be preserved <i>in situ</i>. After the further archaeological investigation has been completed, it will be necessary to draw up a Conservation Management Plan to ensure that the identified sections of pier are properly conserved and integrated into the future Kai Tak Development.</p>	<p>Trenches AA3 & AA5 / prior to construction stage</p> <p>Longjin Pier</p>	CEDD	✓				AMO
			CEDD/AMO/PlanD	✓				

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Table A4.7 Implementation Schedule for Landscape and Visual Measures for Schedule 3 EIA

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S13.9	CM1 All existing trees should be carefully protected during construction.	Working site / During Construction Phase	Contractor	√	√			EIAO TM
S13.9	CM2 Trees unavoidably affected by the works should be transplanted where practical. Detailed transplanting proposal will be submitted to relevant government departments for approval in accordance with ETWBC 2/2004 and 3/2006. Final locations of transplanted trees should be agreed prior to commencement of the work.	Working site / During Construction Phase	Contractor	√	√			EIAO TM
S13.9	CM3 Control of night-time lighting.	Working site / During Construction Phase	Contractor	√	√			EIAO TM
S13.9	CM4 Erection of decorative screen hoarding.	Working site / During Construction Phase	Contractor	√	√			EIAO TM
S13.9	OM1 Compensatory tree planting should be incorporated into the proposed projects where trees are affected.	Working site / During Design Stage and Operation Phase	CEDD/HyD/ DSD	√		√		EIAO TM
S13.9	OM2 Tall buffer screen tree planting should be incorporated to soften hard engineering structures.	Working site / During Design Stage and Operation Phase	CEDD/HyD/DS D	√		√		EIAO TM
S13.9	OM3 Sensitive streetscape design should be incorporated along all new roads to reflect the new urban development in Kai Tak.	Working site / During Design Stage and Operation Phase	CEDD/HyD	√		√		EIAO TM
S13.9	OM4 Structure and ornamental tree planting should be provided along roadside amenity strips and central dividers to enhance the townscape quality, where space is available.	Working site / During Design Stage and Operation Phase	CEDD/HyD	√		√		EIAO TM
S13.9	OM5 Aesthetically pleasing design as regard to the form, material and finishes should be incorporated to all buildings, engineering structures and associated infrastructure facilities.	Working site / During Design Stage and Operation Phase	CEDD/HyD/DS D	√		√		EIAO TM

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*			Relevant Legislation and Guidelines
				Des	C	O	
S13.9	OM6 Control of Operation Night-time Glare.	Working site / During Design Stage and Operation Phase	ASD Stadium, Operator of Cruise Terminal	√		√	EIAO TM

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

Note 1: For DP2, DSD will be implementation agent for the initial phase of PS1 & PS3 only and CEDD will be the implementation agent for PS1A, PS2, SPS at Site 5A1, PS6, and the ultimate phase of PS1 & PS3.

Table A4.8 Implementation Schedule for Ecological Measures for Schedule 3 EIA

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S14.7.2	As far as possible, it is recommended that implementation of compensatory planting of similar composition of native trees and vegetation at a ratio of less than 1:1 in terms of quality and quantity within the Project area should be provided after the construction works.	Within the open space area including the Metro Park / After construction phase	Contractor		√			EIAO TM.
S14.7.4	Translocate those existing coral colonies attached on boulders that are manually movable by a diver underwater (possibly longest dimension of less than 50 cm) located within the hard substrata sea area within the dredging sites as far as practicable prior to the commencement of the dredging activities. The entire translocation exercise includes the preparation of a detailed translocation plan, the pre-translocation coral survey, the coral translocation, and the quarterly post-translocation monitoring for one year. Pre-translocation survey would be focused on identifying and mapping coral colonies that would be directly impacted by the proposed dredging and investigating the translocation feasibility of these coral colonies. This whole translocation exercise should be prepared during the detailed design stage of the Project which, together with the ecologist involved in coral translocation, should be approved by AFCD prior to commencement of the translocation. The proposed relocation of the coral colonies should not affect any private/public marine rights at the recipient site.	Along the section of the former Kai Tak Airport runway that will be directly affected by the cruise terminal dredging work / During detailed design stage Along the section of the runway that would be directly affected by dredging work associated with the opening of a runway gap / During detailed design stage	Contractor Contractor	√				EIAO TM.

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S.14.7.9	Temporary loss of artificial seawall habitats should be recovered by the re-construction of new vertical seawalls. The new seawalls are expected to provide large area of hard substrata for settlement and recruitment of intertidal and subtidal assemblages similar to those previously recorded from existing habitats.	The section of the former Kai Tak Airport runway that will be directed affected by the cruise terminal construction / After construction phase The section of the former Kai Tak Airport runway that will be directed affected by dredging work associated with the opening of a runway gap / After construction phase	Contractor Contractor	√	√			EIAO-TM

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