

APPENDIX 10.1 IMPLEMENTATION SCHEDULE OF THE PROPOSED MITIGATION MEASURES

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Implementation Agent	Location of the Measure	When to implement	Relevant Legislation and Guidelines
3.10.1	2.9.2	<p>Construction Air Quality Impact</p> <ul style="list-style-type: none"> • watering of active construction works area twice a day • skip hoist for material transport shall be totally enclosed by impervious sheeting • every vehicle shall 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 shall be paved with concrete, bituminous materials or hardcore • where a site boundary adjoins a road, streets or other accessible to the public, hoarding of not less than 2.4m high from ground level shall be provided along the entire length except for a site entrance or exit • every stack of more than 20 bags of cement shall be covered entirely by impervious sheeting places in an area sheltered on the top and the 3 sides • all dusty materials shall 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 shall be controlled to a minimum practical height to limit fugitive dust generation from unloading • stockpile of excavated or dusty materials shall be covered entirely by clean impervious sheeting • the load of dusty materials carried by vehicle leaving a construction site shall be covered entirely by clean impervious sheeting to ensure dust materials do not leak from the vehicle • instigation of an environmental monitoring and auditing 	Contractor	Works Area	Construction Phase	EIAO-TM Air Pollution Control (Construction Dust) Regulation

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		program to monitor the construction process in order to enforce controls and modify method of work if dusty conditions arise				
Construction Noise Impact						
4.9.2-4.9.3	3.8.1	<ul style="list-style-type: none"> Adoption of Quieter PME 	Contractor	Works Area	Construction Phase	EIAO-TM Noise Control Ordinance
4.9.4	3.8.1	<ul style="list-style-type: none"> Use of Movable Noise Barrier <ul style="list-style-type: none"> 5 dB(A) reduction for movable PME and 10 dB(A) for stationary PME can be achieved depending on the actual design of movable noise barrier Barrier material of surface mass in excess of 7 kg/m² is recommended to achieve the predicted screening effect 	Contractor	Works Area	Construction Phase	EIAO-TM Noise Control Ordinance
4.9.5	3.8.1	<ul style="list-style-type: none"> Use of Noise Enclosure/Acoustic Shed <ul style="list-style-type: none"> Noise Enclosure or Acoustic Shed is to cover stationary PME such as air compressor and concrete pump. With the adoption of the noise enclosure, the PME could be completely screened, and noise reduction of 15 dB(A) can be achieved according to the GW-TM 	Contractor	Works Area	Construction Phase	EIAO-TM Noise Control Ordinance
4.9.6	3.8.1	<ul style="list-style-type: none"> Use of Silencer <ul style="list-style-type: none"> Silencers are recommended to be used in fan ventilation system to attenuate noise generated during fan operation to achieve a noise reduction of 15dB(A). The Contractor shall be responsible for selection of appropriate silencers for the ventilation fans. 	Contractor	Works Area	Construction Phase	EIAO-TM Noise Control Ordinance
4.9.7	3.8.1	<ul style="list-style-type: none"> Use of Noise Insulating Fabric <ul style="list-style-type: none"> Noise insulating fabric (the Fabric) can be adopted for certain PME (e.g. drill rig, piling auger etc) The Fabric should be lapped such that no opening or gaps on the joints. Technical data from manufacturer states that by using the Fabric, a noise reduction of over 10 dB(A) can be achieved on noise level (Reference was 	Contractor	Works Area	Construction Phase	EIAO-TM Noise Control Ordinance

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4.6.6	3.8.1	made from Modifications to MTRC Tsim Sha Tsui Station Variation of Environmental Permit EP-113/2001/C). As an conservative approach, a noise reduction of 10 dB(A) for the PME lapped with the Fabric was assumed. <ul style="list-style-type: none"> Decking over the excavation areas at the Entrance A1 and satellite concourse 	Contractor	Works Area	Construction Phase	EIAO-TM Noise Control Ordinance
4.10.8	3.8.1	<u>Good Site Practices</u> <ul style="list-style-type: none"> Only well-maintained plant shall be operated on-site and plant shall be serviced regularly during the construction program. Silencers or mufflers on construction equipment shall be utilised and shall be properly maintained during the construction program. Mobile plant, if any, shall 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 shall 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 shall be effectively utilised, wherever practicable, in screening noise from on-site construction activities. 	Contractor	Works Area	Construction Phase	EIAO-TM Noise Control Ordinance
Operation Noise Impact						
Table 4.8	Table 3.4	<ul style="list-style-type: none"> The maximum Sound Power Levels (SWLs) for the ventilation shaft openings shall be complied with during the selection of ventilation fans and mitigation measures. 	Designer	Station, ventilation shafts and E&M plant items	Design Phase	EIAO-TM

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4.9.10	3.9.2	<ul style="list-style-type: none"> Choose quieter plant such as those which have been effectively silenced. Include noise levels specification when ordering new plant (including chiller and E/M equipment). Locate fixed plant/louwer away from any NSRs as far as practicable. Locate fixed plant in walled plant rooms or in specially designed enclosures. Locate noisy machines in a basement or a completely separate building. Install direct noise mitigation measures including silencers, acoustic louvers and acoustic enclosure where necessary. Develop and implement a regularly scheduled plant maintenance programme so that equipment is properly operated and serviced in order to maintain controlled level of noise. The programme should be implemented by properly trained personnel. 	Designer / Contractor	Station, ventilation shafts and E&M plant items	Design / Operational Phase	EIAO-TM Noise Control Ordinance
Construction Water Quality Impact						
5.13.2	4.3.2	<p>Construction runoff and site drainage should be prevented or minimized in accordance with the guidelines stipulated in ProPECC PN 1/94 "Construction Site Drainage". The specified mitigation measures and practices include the following:</p> <ul style="list-style-type: none"> Provision of perimeter drains to intercept off-site water around the site with internal drainage works and erosion and sedimentation control facilities implemented. These shall be constructed in advance of site formation works and earthworks. Earth bunds or sand bag barriers shall be provided on-site to direct storm water to silt removal facilities. The design of the temporary on-site drainage system will be undertaken by the Contractor prior to the commencement of construction. All drainage facilities and erosion and sediment control 	Contractor	Works Area	Construction Phase	ProPECC PN 1/94 Construction Site Drainage EIAO-TM Water Pollution Control Ordinance Waste Disposal Ordinance

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		<p>structures shall be regularly inspected and maintained to ensure proper and efficient operation at all times and particularly during rainstorms. Deposited silt and grit shall be regularly removed, at the onset of and after each rainstorm to ensure that these facilities are functioning properly at all times.</p> <ul style="list-style-type: none"> • Exposed slope/soil surface shall be covered by tarpaulin as soon as possible to reduce the potential of soil erosion. Arrangements should always be in place to ensure that adequate surface protection measures can be safely carried out well before the arrival of a rainstorm. Other measures that need to be implemented before, during and after rainstorms are summarized in ProPECC PN 1/94. • Open stockpiles of construction materials (e.g. aggregates, sand and fill material) or construction wastes on-site shall be covered with tarpaulin or similar fabric during rainstorms. • Construction works shall be programmed to minimise surface excavation works during the rainy seasons (April to September). All exposed earth areas shall be completed and vegetated 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 surfaces shall be covered by tarpaulin or other means. • Manholes shall 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. • Precautions be taken at any time of year when rainstorms are likely, actions to be taken when a 				

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5.13.4-5.13.6	4.3.3 – 4.3.5	<p>rainstorm is imminent or forecasted, and actions to be taken during or after rainstorms are summarised in Appendix A2 of ProPECC PN 1/94.</p> <ul style="list-style-type: none"> • 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 adequate designed and sited wheel washing facilities shall be provided at every construction site exit, where practicable. Wash-water shall have sand and silt settled out and removed at least on a weekly basis to ensure the continued efficiency of the process. The section of access road leading to, and exiting from, the wheel-wash bay to the public road shall be paved with sufficient backfall toward the wheel-wash bay to prevent vehicle tracking of soil and silty water to public roads and drains. • Oil interceptors shall be provided in the drainage system downstream of any oil/fuel pollution sources. The oil interceptors shall be emptied and cleaned regularly to prevent the release of oil and grease into the storm water drainage system after accidental spillage. A bypass shall be provided for the oil interceptors to prevent flushing during heaving rain. • Construction solid waste, debris and rubbish on site shall be collected, handled and disposed of properly to avoid water quality impacts. 	Contractor	Works Area	Construction Phase	ProPECC PN 1/94 Construction Site Drainage EIAO-TM Water Pollution Control Ordinance

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5.13.7	4.3.6	<p>water in underground area with a high concentration of SS shall be treated (e.g. by settlement in tanks with sufficient retention time) before discharge. Oil interceptors would also be installed to remove the oil, lubricants and grease from the wastewater.</p> <p><u>Sewage Effluent</u></p> <ul style="list-style-type: none"> Temporary sanitary facilities, such as portable chemical toilets, shall be employed on-site where necessary to handle sewage from the workforce. A licensed contractor would be responsible for appropriate disposal of waste matter and maintenance of these facilities. 	Contractor	Works Area	Construction Phase	ProPECC PN 1/94 Construction Site Drainage EIAO-TM Water Pollution Control Ordinance
5.14.1 – 5.14.2	4.3.7 – 4.3.8	<p><u>General Construction Site Activities</u></p> <ul style="list-style-type: none"> Debris and rubbish generated on-site shall be collected, handled and disposed of properly to avoid being flushed or blown by wind into the drainage culvert. Stockpiles of cement and other construction materials should be kept covered when not being used. Oils and fuels shall only be used and stored in designated areas which have pollution prevention facilities. To prevent spillage of fuels and solvents, all fuel tanks and storage areas shall be provided with locks and be sited on sealed areas, within bunds of a capacity equal to 110% of the storage capacity of the largest tank. The bund shall be drained of rainwater after a rain event. 				
Waste Management						
6.7.1	5.2.3	<p><u>Good Site Practices</u></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. 	Contractor	Works Area	Construction Phase	EIAO-TM Waste Disposal Ordinance ETWB TCW No. 19/2005

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		<ul style="list-style-type: none"> • 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. • Regular cleaning and maintenance programme for drainage systems, sumps and oil interceptors. • A Waste Management Plan should be prepared and submitted to the Engineer for approval. One may make reference to ETWB TCW No. 19/2005 for details. • A recording system for the amount of wastes generated, recycled and disposed (including the disposal sites) should be proposed. 				
6.7.2	5.2.4	In order to monitor the disposal of C&D materials at public fill reception facilities, as appropriate, and to control fly tipping, a trip-ticket system should be included as one of the contractual requirements.				
6.7.3	5.2.5	<p><u>Waste Reduction Measures</u></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. 	Contractor	Works Area	Construction Phase	EIAO-TM

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6.7.6 & 6.7.7		<ul style="list-style-type: none"> Plan and stock construction materials carefully to minimise amount of waste generated and avoid unnecessary generation of waste. 				
6.7.6 & 6.7.7	5.2.7 – 5.2.8	<p><u>Construction and Demolition Material</u></p> <p>Within stockpile areas, the following measures shall be taken to control potential environmental impacts or nuisance:</p> <ul style="list-style-type: none"> covering stockpile of C&D material entirely by clean impervious sheet to reduce potential dust impact. locating stockpiles to minimise potential visual impacts. minimizing land intake of stockpile areas as far as possible. When disposing C&D material at a public fill reception facility, the material shall only consist of soil, rock, concrete, brick, cement plaster/mortar, inert building debris, aggregates and asphalt. The material shall be free from marine mud, household refuse, plastic, metals, industrial and chemical waste, animal and vegetable matter, and other material considered to be unsuitable by the Filling Supervisor. 	Contractor	Works Area	Construction Phase	ETWB TCW No. 33/2002 ETWB TCW No. 19/2005
6.7.8	5.2.9	<p><u>Chemical Wastes</u></p> <ul style="list-style-type: none"> After use, chemical wastes (for example, cleaning fluids, solvents, lubrication oil and fuel) should be handled according to the <i>Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes</i>. Spent chemicals should be collected by a licensed collector for disposal at the CWTC or other licensed facility. 	Contractor	Works Area	Construction Phase	EIAO-TM Waste Disposal (Chemical Waste) (General) Regulation
6.7.9	5.2.10	<p><u>General Refuse</u></p> <ul style="list-style-type: none"> General refuse shall be stored in enclosed bins or compaction units separate from C&D material. A licensed waste collector shall be employed by the 	Contractor	Works Area	Construction Phase	Public Health and Municipal Services Ordinance

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		<p>contractor to remove general refuse from the site, separately from C&D material.</p> <ul style="list-style-type: none"> Preferably an enclosed and covered area shall be provided to reduce the occurrence of 'wind blown' light material. 				
Landscape and Visual Impact						
Table 7.5	6.3.1	<ul style="list-style-type: none"> CM1: Existing trees including OVTs to be retained and maintained on site should be carefully protected during construction. Encroachment of any works close to the drip line of OVTs should be avoided. CM2: Trees of high amenity and survival rate after transplanting which unavoidably affected by the works should be transplanted where practical. CM3: Control of night – time lighting. CM4: Erection of decorative screen hoarding compatible with surrounding setting. 	Contractor	Works Area	Construction Phase	EIAO-TM
Table 7.6	6.3.1	<ul style="list-style-type: none"> OM1: Aesthetic design of Entrance A1 (Minimisation of building bulk and adoption of transparent material) and Emergency Exit OM2: Reinstatement of Entrance to Kowloon Park OM3: Planting of 4 nos. of <i>Delonix regia</i> or species as agreed with LCSD along Haiphong Road 	Contractor	Works Area	Operation Phase	EIAO-TM
Built Heritage Impact						
8.7.4	7.1.1	<ul style="list-style-type: none"> Temporary removal of the two granite columns (east of brick wall of modern extension of Block S4) and will be stored securely during construction period, and reinstated back to its original location after completion of works. 	Contractor	Works Area	Construction Phase	EIAO-TM
8.8.1 – 8.8.2	7.2.1 – 7.2.4	<ul style="list-style-type: none"> Precautions shall be taken throughout the construction stage to prevent any damage to the historical building, Structural monitoring system, including preconstruction survey shall be designed and implemented by a Registered Structural Engineer to ensure compliance with the Building Ordinance. Consult AMO on any other mitigation measures that 	Contractor	Works Area	Construction Phase	EIAO-TM; Building Ordinance

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		<p>would be required administratively or under Antiquities and Monuments Ordinance. Implement these requirements from AMO during the construction period.</p> <ul style="list-style-type: none"> • use of sensibly designed hoardings to minimize the temporary visual impact during construction phase 				