

ANNEX B

IMPLEMENTATION SCHEDULE

1. INTRODUCTION

This Part of the EIA Report provides a consolidation of the mitigation measures recommended by the EIA Study for the MOS Extension.

The consolidation is presented in the form of an Implementation Schedule in accordance with the format specified in Section 4.1.3 of the *EIA Study Brief No. ESB-015/1998 - East Rail Extensions - Tai Wai to Ma On Shan*.

The Implementation Schedule presents the recommended mitigation measures for both the construction and operation of the MOS Extension.

The Implementation Schedule has the following column headings:

EIA Ref :

This denoted the section number or reference from the EIA Report Main text.

EM&A LOG REF:

This denoted the sequential number of each of the recommended mitigation measures specified in the Implementation Schedule.

Environmental Protection Measures:

This denotes the recommended mitigation measures, courses of action or subsequent deliverables that are to be adopted, undertaken or delivered to avoid, minimise or ameliorate predicted environmental impacts.

Location/Duration of Measures/Timing of Completion of Measures:

This indicates the spatial area in which the recommended mitigation measures are to be implemented together with details of the programming or timing of their implementation.

Implementation Agent:

This denotes where the responsibility lies for the implementation of the recommended mitigation measures.

Implementation Stage:

This denotes the stage at which the recommended mitigation measures are to be implemented; either during the Design, Construction, Operation or Decommissioning.

Relevant Legislation & Guidelines:

This section defines the controlling legislation or guidelines that are either required to be complied with, or should be complied with as good practice.

Implementation Schedule

EIA* Ref.	EM&A Log Ref	Environmental Protection Measures	Location/Duration of Measures/Timing of Completion of Measures	Implementation Agent	Implementation Stage**	Relevant Legislation & Guidelines
Des C O Dec						
AIR QUALITY -Construction Phase						
3.4.3	A1	<p><i>Standard Dust Suppression Measures</i></p> <p>The following measures shall be incorporated into the contract documents and adopted as part of good site practice:</p> <ul style="list-style-type: none"> the areas at which demolition work are to take place should be sprayed with water or dust suppressing chemicals immediately upon commencing the works and at regular intervals throughout the duration of the demolition works in order to ensure that the entire surface of the works is maintained in a damp condition; all demolished items that have the potential to emit dust particles should be covered entirely with impervious sheeting or placed in an area sheltered on the top and the 3 sides within a day of demolition; all stockpiles of excavated material shall be either covered entirely by impervious sheeting or sprayed with water so as to maintain it in a damp condition; vehicle washing facilities shall be provided at every exit point, and mechanisms put in place to ensure that they are used effectively. 	<p>All parts of all works areas and construction sites, and throughout the full duration of the construction contract(s)</p> <p>All parts of all works areas and construction sites, and throughout the full duration of the construction contract(s)</p> <p>All parts of all works areas and construction sites, and throughout the full duration of the construction contract(s)</p> <p>All vehicle exits points, for the duration of their use</p>	<p>To be implemented by KCRC's Contractor(s) and enforced by KCRC's Construction Manager</p> <p>To be implemented by KCRC's Contractor(s) and enforced by KCRC's Construction Manager</p> <p>To be implemented by KCRC's Contractor(s) and enforced by KCRC's Construction Manager</p> <p>To be implemented by KCRC's Contractor(s) and enforced by KCRC's Construction Manager</p>	<p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p>	<p><i>Air Pollution Control (Construction Dust) Regulations, LS2, Part I, 3</i></p> <p><i>Air Pollution Control (Construction Dust) Regulations, LS2, Part IV, 18</i></p> <p><i>Air Pollution Control (Construction Dust) Regulations, LS2, Part IV, 18</i></p> <p><i>Air Pollution Control (Construction Dust) Regulations, LS2, Part III, 13</i></p>

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		<ul style="list-style-type: none"> where a site boundary adjoins a road, street, service lane or other area accessible to the public, hoarding of not less than 2.4 m above ground level shall be provided along the entire length of that portion of the site boundary except for any site entrances or exits; every main haul road shall be sprayed with water or a dust suppressing chemical so as to maintain the entire road surface in a damp condition; all dusty materials shall be sprayed with water or a dust suppression chemical immediately prior to any loading, unloading or transfer operation so as to maintain the dust materials in a damp condition. 	<p>All parts of all works areas adjoining a road, street, service lane or other area accessible to the public, and throughout the full duration of the construction contract(s)</p> <p>All haul roads within the works areas and construction sites, and throughout the full duration of the construction contract(s) subject to weather conditions</p> <p>All parts of all works areas and construction sites, and throughout the full duration of the construction contract(s)</p>	<p>To be implemented by KCRC's Contractor(s) and enforced by KCRC's Construction Manager</p> <p>To be implemented by KCRC's Contractor(s) and enforced by KCRC's Construction Manager</p> <p>To be implemented by KCRC's Contractor(s) and enforced by KCRC's Construction Manager</p>	<p>✓</p> <p>✓</p> <p>✓</p>	<p><i>Air Pollution Control (Construction Dust) Regulations, LS2, Part III, 13</i></p> <p><i>Air Pollution Control (Construction Dust) Regulations, LS2, Part III, 14</i></p> <p><i>Air Pollution Control (Construction Dust) Regulations, LS2, Part III, 14</i></p>
A2		<ul style="list-style-type: none"> The following specific control measures shall also be incorporated into the contract documents to prevent fugitive dust emission: every stockpile of cement or dry pulverised fuel ash shall be covered entirely by impervious sheeting; all receiving hoppers for unloading materials shall be enclosed on 3 sides up to 3 m above the unloading point; cement or dry pulverised fuel ash delivered in bulk shall be stored in a closed silo fitted with an audible high level alarm which is interlocked with 	<p>All parts of all works areas and construction sites, and throughout the full duration of the construction contract(s)</p> <p>All parts of all works areas and construction sites, and throughout the full duration of the construction contract(s)</p> <p>All parts of all works areas and construction sites, and throughout the full duration of the construction contract(s)</p>	<p>To be implemented by KCRC's Contractor(s) and enforced by KCRC's Construction Manager</p> <p>To be implemented by KCRC's Contractor(s) and enforced by KCRC's Construction Manager</p> <p>To be implemented by KCRC's Contractor(s) and enforced by KCRC's Construction Manager</p>	<p>✓</p> <p>✓</p> <p>✓</p>	<p><i>Best Practicable Means Requirements for Cement Work (Concrete Batching Plant)</i></p> <p><i>Best Practicable Means Requirements for Cement Work (Concrete Batching Plant)</i></p> <p><i>Best Practicable Means Requirements for Cement Work (Concrete Batching Plant)</i></p>

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		the material filling line to warn of over-filling;		Construction Manager		Plant)
		<ul style="list-style-type: none"> • silos used for the storage of cement or dry pulverised fuel ash shall not be overfilled; 	All parts of all works areas and construction sites, and throughout the full duration of the construction contract(s)	To be implemented by KRCRC's Contractor(s) and enforced by KRCRC's Construction Manager	✓	Best Practicable Means Requirements for Cement Work (Concrete Batching Plant)
		<ul style="list-style-type: none"> • the loading, unloading, handling, transfer or storage of dusty materials shall be carried out in such a manner to minimise dust emissions and in an enclosed system or facility; 	All parts of all works areas and construction sites, and throughout the full duration of the construction contract(s)	To be implemented by KRCRC's Contractor(s) and enforced by KRCRC's Construction Manager	✓	Best Practicable Means Requirements for Cement Work (Concrete Batching Plant)
		<ul style="list-style-type: none"> • any vent or exhaust to a silo or other part of the concrete batching facility shall be fitted with an effective fabric filter; 	All parts of all works areas and construction sites, and throughout the full duration of the construction contract(s)	To be implemented by KRCRC's Contractor(s) and enforced by KRCRC's Construction Manager	✓	Best Practicable Means Requirements for Cement Work (Concrete Batching Plant)
		<ul style="list-style-type: none"> • any belt conveyor shall be enclosed on the top and on 2 sides with a metal board at the bottom to eliminate any dust emission due to wind-whipping effects; 	All parts of all works areas and construction sites, and throughout the full duration of the construction contract(s)	To be implemented by KRCRC's Contractor(s) and enforced by KRCRC's Construction Manager	✓	Best Practicable Means Requirements for Cement Work (Concrete Batching Plant)
		<ul style="list-style-type: none"> • all conveyor transfer points should be totally enclosed; 	All parts of all works areas and construction sites, and throughout the full duration of the construction contract(s)	To be implemented by KRCRC's Contractor(s) and enforced by KRCRC's Construction Manager	✓	Best Practicable Means Requirements for Cement Work (Concrete Batching Plant)
		<ul style="list-style-type: none"> • the filter bags in the cement silo dust collector must be thoroughly shaken after cement is blown into the silo to ensure adequate dust collection for subsequent loads; 	All parts of all works areas and construction sites, and throughout the full duration of the construction contract(s)	To be implemented by KRCRC's Contractor(s) and enforced by KRCRC's Construction Manager	✓	Best Practicable Means Requirements for Cement Work (Concrete Batching Plant)
		<ul style="list-style-type: none"> • for dry mix batching, the truck batching aperture shall be shrouded and fitted with water 	All parts of all works areas and construction sites, and throughout the full duration of the construction contract(s)	To be implemented by KRCRC's Contractor(s) and enforced by KRCRC's Construction Manager	✓	Best Practicable Means Requirements for Cement Work (Concrete Batching Plant)

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		suppression sprays;	duration of the construction contract(s)	enforced by KCRC's Construction Manager			Plant)
		<ul style="list-style-type: none"> vents of all silos and weighing scale shall be fitted with a fabric filtering system. 	All parts of all works areas and construction sites, and throughout the full duration of the construction contract(s)	To be implemented by KCRC's Contractor(s) and enforced by KCRC's Construction Manager	✓		Best Practicable Means Requirements for Cement Work (Concrete Batching Plant)
A3		Control of Odour					
#		Should any excavated materials be odorous, the following mitigation measures shall be implemented to minimise odour nuisance at nearby ASRs:					
		<ul style="list-style-type: none"> the odorous material shall be removed from site within one day to reduce the amount of time available for decomposition; 	All parts of all works areas and construction sites, and throughout the full duration of the construction contract(s)	To be implemented by KCRC's Contractor(s) and enforced by KCRC's Construction Manager	✓		Annex 4 of EIAO TM
		<ul style="list-style-type: none"> the odorous materials shall be immediately covered with plastic tarpaulin sheets prior to its removal from site. 	All parts of all works areas and construction sites, and throughout the full duration of the construction contract(s)	To be implemented by KCRC's Contractor(s) and enforced by KCRC's Construction Manager	✓		Annex 4 of EIAO TM
B1		CONSTRUCTION NOISE					
		Good Site Practices					
		The following measures should be implemented during each phase of construction:					

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		<ul style="list-style-type: none"> only well-maintained plant (ie that which does not emit excessive noise due to squeaking or rattling etc) shall be operated on-site and plant shall be serviced regularly during the construction programme; machines and plant (such as trucks) that are in intermittent use shall be shut down between work periods or throttled down to a minimum; plant known to emit noise strongly in one direction, shall, where possible, be orientated so that the noise is directed away from nearby NSRs; silencers or mufflers on construction equipment shall be properly fitted and maintained; and mobile plant shall be sited as far away from NSRs as possible (subject to working constraints such as power supply, safety and obstructing the proposed works). 	All parts of all works areas and construction sites, and throughout the full duration of the construction contract(s)	To be implemented by KCRC's Contractor(s) and enforced by KCRC's Construction Manager	✓	Noise Control Ordinance (NCO) and Annex 5 of the EIAO TM	
B2		<i>Use of Quiet Plant and Working Methods</i> Where available, the Contractor shall use models of plant that are quieter than those specified in the EPD's technical memorandum (GW-TM).	All parts of all works areas and construction sites, and throughout the full duration of the construction contract(s)	To be implemented by KCRC's Contractor(s) and enforced by KCRC's Construction Manager	✓	Noise Control Ordinance (NCO) and Annex 5 of the EIAO TM	
B3		<i>Temporary and Movable Noise Barriers</i> Movable barriers of 3 to 5 m height with a small cantilevered upper portion and skid footing shall be located within a few metres of static plant and within about 5 m of mobile equipment such as excavators	All parts of all works areas and construction sites, and throughout the full duration of the construction contract(s)	To be implemented by KCRC's Contractor(s) and enforced by KCRC's	✓	Noise Control Ordinance (NCO) and Annex 5 of the EIAO TM	

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		and mobile cranes etc such that the line of sight is blocked by the barriers viewed from the NSRs. If practicable, the Contractor should provide purpose-built noise barriers or screens constructed of appropriate material (minimum superficial density of 15 kg/m ²) located close to operating PME, in order to reduce the noise impact to the surrounding sensitive uses. (Note: The provision of temporary noise barriers may be restricted due to constraints relating to safety and engineering practicality).		Construction Manager					
	B4	<i>Reducing the Numbers of Plant Operating in Critical Areas Close to NSRs</i>							
		Wherever practicable, the Contractor shall reduce the number of items of plant operating at the same time at the specified locations. (Note: The implementation of this mitigation measure may be restricted due to constraints relating to safety and engineering practicality).	At worksites during for viaduct and station construction (ie sections between Tai Wai and Shek Mun, and Chevalier Gardens to Lee On)	To be implemented by KCRC's Contractor(s) and enforced by KCRC's Construction Manager	✓				Noise Control Ordinance (NCO) and Annex 5 of the EIAO TM
5.6.3	C1	WATER QUALITY - Construction Phase							
	#	<i>General Construction Phase Mitigation Measures</i>							
		The following measures shall be implemented:	All parts of all works areas and construction sites, and throughout the full duration of the construction contract(s)	To be implemented by KCRC's Contractor(s) and enforced by KCRC's Construction Manager	✓				Practice Note for Professional Persons on Construction Site Drainage, EPD, 1994 (ProPECC PN 1/94)
		<ul style="list-style-type: none"> wheel washing facilities and sediment traps shall be provided at each site exit, a maintenance regime shall be devised and implemented for the drainage systems to prevent flooding and overflow, procedures shall be developed and implemented 							<i>Water Pollution Control Ordinance (WPCO)</i>

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		for the collection and treatment of sewage, and				
		<ul style="list-style-type: none"> comprehensive waste management (collection, handling, transportation, disposal) procedures shall be devised and implemented. 				
C2	#	<p><i>Construction Runoff and Drainage (Erosion Control Plan)</i></p> <p>At the start of site establishment, perimeter cut-off drains shall be constructed to direct off-site water around the site, and internal drainage works and erosion and sedimentation control facilities shall be implemented. Channels, earth bunds or sand bag barriers shall be provided on site to direct stormwater to silt removal facilities. The design of efficient silt removal facilities should be based on the guidelines in Appendix A1 of ProPECC PN 1/94. All the surface runoff or extruded ground water contaminated by silt and suspended solids should be collected by the on-site drainage system and diverted through the silt traps prior to discharge into foul sewer.</p>	All parts of all works areas and construction sites, and throughout the full duration of the construction contract(s)	To be implemented by KCRC's Contractor(s) and enforced by KCRC's Construction Manager	✓	Practice Note for Professional Persons on Construction Site Drainage, EPD, 1994 (ProPECC PN 1/94) <i>Water Pollution Control Ordinance (WPCO)</i>
C3	#	The overall slope of the site shall be kept to a minimum to reduce the erosive potential of surface water flows, and all trafficked areas and access roads shall be protected by coarse stone ballast.	All parts of all works areas and construction sites, and throughout the full duration of the construction contract(s)	To be implemented by KCRC's Contractor(s) and enforced by KCRC's Construction Manager	✓	<i>Water Pollution Control Ordinance (WPCO)</i>
C4	#	Construction works shall be programmed to avoid, or if this is not practicable, to minimise surface excavation works during the rainy season (April to September). All exposed earth areas shall be completed as soon as possible after earthworks have been completed, or alternatively, within 14 days of the cessation of earthworks where practicable. If	All parts of all works areas and construction sites, and throughout the full duration of the construction contract(s)	To be implemented by KCRC's Contractor(s) and enforced by KCRC's Construction Manager	✓	<i>Water Pollution Control Ordinance (WPCO)</i>

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Des C O Dec						
		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.				
C5	#	Sediment tanks of sufficient capacity to handle the predicted water flows shall be provided for settling out waste water prior to its disposal. The sediment tanks shall be constructed from pre-formed individual cells of approximately 6 to 8 m ³ capacity. The system capacity shall be flexible and able to handle multiple inputs from a variety of sources including influent that is pumped.	All parts of all works areas and construction sites, and throughout the full duration of the construction contract(s)	To be implemented by KCRC's Contractor(s) and enforced by KCRC's Construction Manager	✓	Water Pollution Control Ordinance (WPCO)
C6		All drainage facilities and erosion and sediment control structures shall be regularly inspected and maintained to ensure proper and efficient operation at all times and particularly following rainstorms. Deposited silt and grit shall be removed regularly and disposed of by spreading evenly over stable, vegetated areas.	All parts of all works areas and construction sites, and throughout the full duration of the construction contract(s)	To be implemented by KCRC's Contractor(s) and enforced by KCRC's Construction Manager	✓	Water Pollution Control Ordinance (WPCO)
C7	#	Measures shall be taken to minimise the ingress of site drainage into excavations. If the excavation of trenches in wet periods is necessary, they shall be dug and backfilled in short sections wherever practicable. Water pumped out from trenches or foundation excavations should be discharged into storm drains via silt removal facilities.	All parts of all works areas and construction sites, and throughout the full duration of the construction contract(s)	To be implemented by KCRC's Contractor(s) and enforced by KCRC's Construction Manager	✓	Water Pollution Control Ordinance (WPCO)
C8	#	Open stockpiles of construction materials (for example, aggregates, sand and fill material) of more than 50 m ³ shall be covered with tarpaulin or similar fabric during rainstorms. Measures shall be taken to prevent the washing away of construction materials,	All parts of all works areas and construction sites, and throughout the full duration of the construction contract(s)	To be implemented by KCRC's Contractor(s) and enforced by KCRC's Construction Manager	✓	Water Pollution Control Ordinance (WPCO)

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		soil, silt or debris into any drainage system.				
C9	#	Manholes (including newly constructed ones) 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.	All parts of all works areas and construction sites, and throughout the full duration of the construction contract(s)	To be implemented by KCRC's Contractor(s) and enforced by KCRC's Construction Manager	✓	Water Pollution Control Ordinance (WPCO)
C10		The recommendations in Appendix A2 of ProPECC PN 1/94 (ie the measures to be taken at any time of year when rainstorms are likely, when a rainstorm is imminent or forecasted, and during or after rainstorms) shall be implemented. Particular attention shall be paid to the control of silty surface runoff during storm events, especially for areas located near steep slopes.	All parts of all works areas and construction sites, and throughout the full duration of the construction contract(s)	To be implemented by KCRC's Contractor(s) and enforced by KCRC's Construction Manager	✓	Water Pollution Control Ordinance (WPCO)
C11	#	All vehicles and plant shall be cleaned before leaving the construction site to ensure no earth, mud or debris is deposited by them on roads. A wheel washing bay shall be provided at every site exit. The wheel washing bay shall be designed and sited to accommodate the predicted through-put of vehicles and shall have an associated sedimentation facility that is capable of removing the sand and silt from the wash-water. The settled out sand and silt shall be 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 soil and silty water to public roads and drains.	All construction site exits for the full duration of the construction contract(s)	To be implemented by KCRC's Contractor(s) and enforced by KCRC's Construction Manager	✓	Water Pollution Control Ordinance (WPCO)

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C12	#	Oil interceptors shall be provided in the drainage system downstream of any oil/fuel pollution sources associated with construction. The oil interceptors shall regularly emptied to prevent the release of oil and grease into the storm water drainage system after accidental spillages. The interceptor shall have a bypass to prevent flushing during periods of heavy rain.	All parts of the works areas and construction sites that may potentially experience spillages of oil or fuel associated with construction works, and throughout the full duration of the construction contract(s)	To be implemented by KCRC's Contractor(s) and enforced by KCRC's Construction Manager	✓	Water Pollution Control Ordinance (WPCO)
C13	#	All temporary and permanent drainage pipes and culverts provided to facilitate runoff discharge shall be designed for the controlled release of storm flows. All sediment traps shall be regularly cleaned and maintained. The temporary diverted drainage shall be reinstated to the original condition when the construction works have finished or the temporary diversion is no longer required.	All parts of all works areas and construction sites, and throughout the full duration of the construction contract(s)	To be implemented by KCRC's Contractor(s) and enforced by KCRC's Construction Manager	✓	Water Pollution Control Ordinance (WPCO)
C14	#	Existing drainage arrangements shall not be adversely affected during construction works, and any flow from the construction site must pass through settling traps/ponds before being discharged into the public drainage system.	All parts of all works areas and construction sites, and throughout the full duration of the construction contract(s)	To be implemented by KCRC's Contractor(s) and enforced by KCRC's Construction Manager	✓	Practice Note for Professional Persons on Construction Site Drainage, EPD, 1994 (ProPECC PN 1/94) Water Pollution Control Ordinance (WPCO)

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C15		<i>Dredging and Marine Disposal of Dredged Sediment</i>				
#		<p>The following mitigation measures should be implemented to minimise the potential water quality impact during dredging:</p> <ul style="list-style-type: none"> • contaminated sediments shall be dredged using grabs of no more than 8 m³; • disturbance to the sediments shall be minimised by ensuring care when manoeuvring the grab; • all vessels used shall be sized to allow adequate clearance of the river/seabed; • barges shall be fitted with tight fitting seals to their bottom openings to prevent leakage of material; • barge loading shall be accurate to avoid splashing dredged material into the surrounding water; • specialised water tight grabs shall be used to control sediment loss and hoist speeds shall be suitably low during operation; • overflow of materials or polluted water shall be prevented during loading or transportation. Adequate freeboard shall be maintained to ensure that the decks are not washed by wave action; • large objects and debris shall be manually removed prior to mechanical dredging to minimise losses from partially closed grabs; 	<p>During dredging works associated with the construction of foundations for viaducts over the Shing Mun River, and Siu Lek Yuen and Tai Shui Hang Nullahs</p>	<p>To be implemented by KCRC's Contractor(s) and enforced by KCRC's Construction Manager</p>	✓	<p>Practice Note for Professional Persons on Construction Site Drainage, EPD, 1994 (ProPECC PN 1/94)</p> <p><i>Water Pollution Control Ordinance (WPCO)</i></p>

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		<ul style="list-style-type: none"> construction works shall cause no visible foam, oil, grease, scum, litter or other objectionable matter to be present in the water within the site or dumping grounds; appropriate water quality monitoring shall be implemented during dredging works; transport of contaminated mud to marine disposal sites should, wherever possible, be by split barges of not less than 750 m3 capacity, well maintained and capable of rapid opening and discharge at the disposal site; monitoring of the barge loading shall be carried out to ensure that loss of material does not take place during transportation; stockpiling of any moderately or seriously contaminated (Class B and Class C) marine sediment at the site shall be prohibited, and there shall be careful control in relation to the stockpiling of any uncontaminated (Class A) sediment to prevent runoff, resuspension and odour nuisances; and on-site auditing of the equipment and plant is essential to ensure that it is used in the appropriate manner. 	<p>During dredging works associated with the construction of foundations for viaducts over the Shing Mun River, and Siu Lek Yuen and Tai Shui Hang Nullahs</p>	<p>To be implemented by KCRC's Contractor(s) and enforced by KCRC's Construction Manager</p>	<p>✓</p>	<p>Practice Note for Professional Persons on Construction Site Drainage, EPD, 1994 (ProPECC PN 1/94)</p> <p>Water Pollution Control Ordinance (WPCO)</p>

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1.6.2		For the marine disposal of mud, a sediment quality report (SQR) shall be prepared as part of the application for a dumping permit under the Dumping at Sea Ordinance. The SQR for marine mud disposal should be prepared and submitted to EPD for approval after a comprehensive site investigation.	Prior to dredging works that may give rise to mud that will require marine disposal (eg the works associated with the construction of foundations for viaducts over the Shing Mun River, and Siu Lek Yuen and Tai Shui Hang Nullahs)	To be implemented by KCRC's Contractor(s) and enforced by KCRC's Construction Manager	✓	Dumping at Sea Ordinance
	C16	<i>Sewage Effluent</i>				
	#	Sewage effluent disposal facilities in the form of chemical toilets and septic tanks shall be provided. Appropriate numbers of portable toilets shall be provided by a licensed contractor to serve the construction workers. The Contractor shall also be responsible for maintenance practices and sewage disposal at an appropriate sewage treatment works.	All parts of all works areas and construction sites, and throughout the full duration of the construction contract(s)	To be implemented by KCRC's Contractor(s) and enforced by KCRC's Construction Manager	✓	Practice Note for Professional Persons on Construction Site Drainage, EPD, 1994 (ProPECC PN 1/94)
	C17	<i>General Construction Activities</i>				
	#	Debris and rubbish on site shall be collected, handled and disposed of properly to avoid entering the water column and causing water quality impacts. Temporary on-site storage of excavated materials from station and depot construction works shall be covered with tarpaulin or similar fabric during rainstorms. Any washout of construction or excavated materials should be diverted to the drainage system via sediment traps. Stockpiling of the excavated material can be minimised by scheduling the construction programme in a way that one section of the alignment can be constructed and completed before the excavation works of the next	All parts of all works areas and construction sites, and throughout the full duration of the construction contract(s)	To be implemented by KCRC's Contractor(s) and enforced by KCRC's Construction Manager	✓	Practice Note for Professional Persons on Construction Site Drainage, EPD, 1994 (ProPECC PN 1/94)

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					Des C O Dec	
		section commence.				
6.5.1	D1	WASTE - Construction Phase Upon appointment, the main contractor of each construction contract should submit a Waste Management Plan which shall describe the arrangements for avoidance, reuse, recovery and recycling, storage, collection, treatment and disposal of different categories of waste to be generated from the construction activities and shall take into account the recommended mitigation measures in the EIA report. Such a management plan shall incorporate site specific factors, such as the designation of areas for segregation and temporary storage of reusable and recyclable materials.	All parts of all works areas and construction sites, and throughout the full duration of the construction contract(s)	To be implemented by KCRC's Contractor(s) and enforced by KCRC's Construction Manager	✓	Waste Disposal Ordinance and subsidiary legislation
		<ul style="list-style-type: none"> • Develop procedures such as a ticketing system to facilitate tracking of marine mud and chemical waste, and to ensure that illegal disposal does not occur; • Segregate and sort the waste materials into 3 categories: <ul style="list-style-type: none"> * public fill (eg concrete and rubble) for re-use on-site or disposal at a public filling area; * re-use and/or recycling waste (eg steel and other metals); * waste which cannot be re-used and/or recycled (eg wood, glass and plastic) for landfill disposal. 				

Implementation Schedule

EIA* Ref.	EM&A Log Ref	Environmental Protection Measures	Location/Duration of Measures/Timing of Completion of Measures	Implementation Agent	Implementation Stage**	Relevant Legislation & Guidelines
					Des C O Dec	
		<p>The sorting process shall be carefully monitored to avoid missing any of the 3 categories. Different types of wastes shall be stockpiled and stored in different containers / skips to enhance re-use or recycling of materials and their proper disposal.</p> <ul style="list-style-type: none"> • Maintain records of the quantities of wastes generated and disposed off-site for each category of waste. <p>Chemical waste that is produced, as defined by Schedule 1 of the Waste Disposal (Chemical Waste) (General) Regulation, shall be handled in accordance with the Code of Practice on the Packaging, Handling and Storage of Chemical Wastes.</p>				
8.5.2	E1	<p>LANDSCAPE & VISUAL IMPACTS - Construction Phase</p> <p>The following mitigation measures shall be implemented to minimise the landscape and visual impact of the construction works:</p> <ul style="list-style-type: none"> • Control of night time lighting; • Erection of decorative screen hoarding; • Advance planting for screening; • Minimising the height of temporary buildings; • Careful positioning of construction plant; • Regular checks shall be carried out to ensure that the work site boundaries are not exceeded and that no damage is being caused to the surrounding 	<p>All parts of all works areas and construction sites, and throughout the full duration of the construction contract(s)</p>	<p>To be implemented by KCRC's Contractor(s) and enforced by KCRC's Construction Manager</p>	✓	EIAO TM

Implementation Schedule

EIA* Ref.	EM&A Log Ref	Environmental Protection Measures	Location/Duration of Measures/Timing of Completion of Measures	Implementation Agent	Implementation Stage**	Relevant Legislation & Guidelines
Des C O Dec						
		<p>areas;</p> <ul style="list-style-type: none"> • Temporary construction sites shall be restored to standards as good as, or better than, the original condition; • Replanting of disturbed vegetation shall be undertaken and this shall use predominantly native plant species; • Topsoil shall be stripped and stored for re-use in the construction of the soft landscape works; • The locations of work sites associated with the proposed development shall be carefully selected to minimise the potential landscape and visual impacts of the proposed construction works; and • The potential for soil erosion shall be reduced at construction stage by minimising the extent of vegetation disturbance on site and by providing a protective cover (e.g. plastic sheeting or a grass cover established by hydroseeding) over any exposed ground. 	<p>All parts of all works areas and construction sites, and throughout the full duration of the construction contract(s)</p>	<p>To be implemented by KCRC's Contractor(s) and enforced by KCRC's Construction Manager</p>	<p>✓</p>	<p>EIAO TM</p>
		<p>Plans shall be finalised and agreed with the appropriate authorities (eg. RSD), for the repaving of the following temporary open space to compensate for that affected during the construction period:</p> <ul style="list-style-type: none"> • 2 basketball courts and 1 tennis court to be located on Sha Tin Tau Road, opposite Chun Shek Estate as mitigation for the temporary impacts on Tsang Tai Uk Recreation Ground. • basketball court to be located within Pok Hong Estate as mitigation for the temporary impacts on 	<p>Prior to commencement of the construction phase</p>	<p>KCRC</p>	<p>✓</p>	<p>EIAO TM</p>

Implementation Schedule

EIA* Ref.	EM&A Log Ref	Environmental Protection Measures	Location/Duration of Measures/Timing of Completion of Measures	Implementation Agent	Implementation Stage**	Relevant Legislation & Guidelines
					Des C O Dec	
		the Estate recreation facilities along Sha Kok Street.				
	F1	CULTURAL AND HERITAGE RESOURCES - Construction Phase				
9.6.1		If the detailed design indicates that pier footings are to be located within the areas of archaeological potential at Sha Tin Wai Hill and east of Sai Sha Road at Lee On, archaeological excavation of the areas affected by the footings shall be undertaken prior to the onset of construction.	Prior to construction, within areas of archaeological potential at Sha Tin Wai Hill and east of Sai Sha Road at Lee On.	KCRC	✓	EIAO TM & Antiquities and Monuments Ordinance
9.6.1		The proposed location of the feeder station in the Ma On Shan - Lee On area will be determined during the detailed design stage and following consultation with CLP. The proposed location of the feeder station shall be critically evaluated in terms of the potential impacts to heritage resources and, if appropriate, the intended location will be subject to archaeological field evaluation prior to a final decision being taken as to its location.	During the detailed design stage and prior to construction.	KCRC	✓	EIAO TM & Antiquities and Monuments Ordinance
10.7.2	G1	CONTAMINATED LAND <i>General Mitigation Measures</i>				
		Potential exposure to contaminated materials shall be minimised by implementing the following generic mitigation measures:				

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EIA* Ref.	EM&A Log Ref	Environmental Protection Measures	Location/Duration of Measures/Timing of Completion of Measures	Implementation Agent	Implementation Stage**	Relevant Legislation & Guidelines
Des C O Dec						
		<ul style="list-style-type: none"> The necessary waste disposal permits shall be obtained, as required, from the appropriate authorities. Records of the quantities of wastes generated and disposed of shall be maintained. In accordance with good construction practice, silt traps shall be used to reduce the impact to drainage caused by suspended solids (SS) arising from disturbed ground, or any construction materials such as cement and gravel. Groundwater shall be disposed of in accordance with the WPCO. 	<p>Prior to undertaking works in areas of high contamination potential or concern.</p> <p>Whilst undertaking works in areas of high contamination potential or concern.</p> <p>Whilst undertaking works in areas of high contamination potential or concern.</p>	<p>To be implemented by KCRC's Contractor(s) and enforced by KCRC's Construction Manager</p> <p>To be implemented by KCRC's Contractor(s) and enforced by KCRC's Construction Manager</p> <p>To be implemented by KCRC's Contractor(s) and enforced by KCRC's Construction Manager</p>	<p>✓</p> <p>✓</p> <p>✓</p>	<p>Waste Disposal Ordinance (Cap 354), Waste Disposal (Chemical Waste) (General) Regulation (Cap 354),</p> <p>Waste Disposal Ordinance (Cap 354), Waste Disposal (Chemical Waste) (General) Regulation (Cap 354),</p> <p>Water Pollution Control Ordinance (WPCO)</p>
Further Actions		<p>A stand alone CAP has been prepared and is submitted in Annex C of this Report for the approval of the EPD. Following receipt of the EPD's approval, the CAP will be implemented and the findings of the investigations will be reported in the Contaminated Assessment Report (CAR). If land contamination is confirmed, a Remediation Assessment Plan (RAP) shall be prepared, and both the CAR and the RAP shall be submitted as a combined report to the EPD for approval. If applicable and required in consultation with the EPD, the contaminated site shall be remediated in accordance with the approved CAR/RAP.</p>	<p>Before the commencement of the construction works</p>	<p>To be implemented by KCRC's Contractor(s) and enforced by KCRC's Construction Manager</p>	<p>✓</p>	<p>EIAO TM Annex 19/3.1.1 & 3.1.2</p>

Implementation Schedule

EIA* Ref.	EM&A Log Ref	Environmental Protection Measures	Location/Duration of Measures/Timing of Completion of Measures	Implementation Agent	Implementation Stage**	Relevant Legislation & Guidelines				
						Des	C	O	Dec	
11.14	H1	HAZARD ASSESSMENT								
		Identify hazards due to intermediate, medium and low pressure pipelines	During and following the detailed design phase	KCRC's detailed design engineers	✓					EIAO TM
		In order to prevent accidental damage to the gas pipelines during the construction works associated with the construction of the MOS Extension, there shall be close liaison with HKCG during the detailed design and construction development processes. In addition, the construction safety plan to be developed by KCRC's contractor, in accordance with KCRC's safety management system, should include a detailed assessment of the construction hazards and specify appropriate controls to reduce the risks.	During and following the detailed design phase, and throughout the construction period	KCRC's detailed design engineers and KCRC's Contractors	✓	✓				EIAO TM
		Develop a construction safety plan in accordance with KCR's Safety Management Plan	Prior to the construction Phase	KCRC's Contractors	✓					EIAO TM, Safety Management Plan
		Carry out a Task Risk Assessment to identify hazards associated with the various construction activities and the controls required to reduce them	During and following the detailed design phase, and throughout the construction period	KCRC's detailed design engineers and KCRC's Contractors	✓	✓				EIAO TM
12.3	11	EM&A REQUIREMENTS - Construction Phase Air Quality								
		Subject to the Environmental Protection Department's (EPD's) agreement, construction phase dust monitoring shall be carried out at the following locations in accordance with the recommendations of section 12.3 of the EIA Report:	At specified dust monitoring locations throughout the duration of the construction works	To be implemented by KCRC's Contractor(s) and enforced by KCRC's Construction Manager	✓					Air Pollution Control (Construction Dust) Regulations

Implementation Schedule

EIA* Ref.	EM&A Log Ref	Environmental Protection Measures	Location/Duration of Measures/Timing of Completion of Measures	Implementation Agent	Implementation Stage**	Relevant Legislation & Guidelines
					Des C O Dec	
		AM1 - Grandway Garden, Block 2				
		AM2 - Chun Shek Estate, Shek Fai House				
		AM3 - Pok Hong Estate, Pok Yat House				
		AM4 - Yau Kam Yuen Prevocational School				
		AM5 - Siu Lek Yuen Road Playground				
		AM6 - Kam Tai Court Block J (WIP)				
		AM7 - Chinese YMCA College				
		AM8 - Ma On Shan Centre Block 1				
		AM9 - Rest Garden at Lee On Estate				
12.4	12	Construction Noise				
		Subject to the Environmental Protection Department's (EPD's) agreement, construction phase noise monitoring shall undertaken at the following locations in accordance with the recommendations in Section 12.4 of the EIA Report:	At specified noise monitoring locations throughout the duration of the construction works	To be implemented by KCRC's Contractor(s) and enforced by KCRC's Construction Manager	✓	Noise Control Ordinance (NCO)
		NM1 - Christian Alliance School				
		NM2 - Sha Tin Tsung Tsin Secondary School & Ng Yuk Sec. School				
		NM3 - Lei Uk Tsuen No. 11-15				

Implementation Schedule

EIA* Ref.	EM&A Log Ref	Environmental Protection Measures	Location/Duration of Measures/Timing of Completion of Measures	Implementation Agent	Implementation Stage**	Relevant Legislation & Guidelines
						Des C O Dec
		NM4 - Shek Yuk House, Chun Shek Estate				
		NM5 - Tin Ka Ping Salvation Army Primary School				
		NM6 - Pok Tai House, Pok Hong Estate				
		NM7 - Caritas H.W. Lee Care & Attention Centre				
		NM8 - Yue Kwan House, Yue Tin Court				
		NM9 - Lam Kau Mow Secondary School				
		NM10 - Ma On Shan Tsung Tsin Secondary School				
		NM11 - Proposed Residential Development on Area 90B				
		NM12 - Chinese YMCA College				
		NM13 - St. Francis Church				
		NM14 - Sun Shine City Block M				
		NM15 - Bayside Towers Block 3				
		NM16 - Caritas Ma On Shan Practical School				
		NM17 - Lee Wing House, Lee On Estate				

Implementation Schedule

EIA* Ref.	EM&A Log Ref	Environmental Protection Measures	Location/Duration of Measures/Timing of Completion of Measures	Implementation Agent	Implementation Stage**	Relevant Legislation & Guidelines
Des C O Dec						
12.6	I3	Water Quality During the course of any riverine works, river water quality monitoring shall be undertaken within the Shing Mun River, Siu Lek Yuen Nullah and Tai Shui Hang Nullah, locations of the control and impact monitoring stations shall be as defined in Section 12.6 of the EIA Report.	During the course of any riverine works within the Shing Mun River, Siu Lek Yuen Nullah and Tai Shui Hang Nullah,	To be implemented by KCRC's Contractor(s) and enforced by KCRC's Construction Manager	✓	Water Pollution Control Ordinance (WPCO)
3.5	J1	AIR QUALITY - Operational Phase <i>Station Ventilation System</i> Ventilation fans and louvres, or air ventilation systems shall be provided to ensure sufficient local air movement within the station concourse. Smoke extraction vents shall also be provided in the event of fire. The vents for all ventilation systems shall be directed away from nearby sensitive receivers.	All stations, the depot and any associated developments	KCRC's Detailed Design Engineers	✓	
	J2	<i>Bus Terminus</i> The bus termini ventilation systems shall be designed to achieve the 1-hour and the 5-minute criteria as stated in ProPECC Note (PN 1/98). In addition, the air inlet and exhaust of the ventilation system shall be directed away from the nearby sensitive uses to avoid nuisance.	All stations, the depot and any associated developments	KCRC's Detailed Design Engineers	✓	ProPECC Note (PN 1/98)

Implementation Schedule

EIA* Ref.	EM&A Log Ref	Environmental Protection Measures	Location/Duration of Measures/Timing of Completion of Measures	Implementation Agent	Implementation Stage**	Relevant Legislation & Guidelines
					Des C O Dec	
			distance of 25 m.			
K5 #		<i>Non-revenue Rolling Stock</i> The noise source term of operational non-revenue locomotives shall be limited to Lmax 71 dB(A) on viaduct at 25 m for a maximum speed of 50 kph. For trailing flat bed wagons and other operational equipment, the source term shall not exceed Lmax 73.1 dB(A) on viaduct at 25 m for a maximum speed of 50 kph.	All non-revenue trains to be used on the railway extension between Tai Wai and Lee On at all time periods during the operational phase.	KCRC's Detailed Design Engineers (Rolling Stock)	✓	Noise Control Ordinance and EIAOTM
K6 #		<i>Air-conditioning Units</i> The noise specification of air-conditioning units mounted on the roof of revenue trains shall not exceed a noise level of 57 dB(A) at a distance of 15 m from the train.	All revenue trains to be used on the railway extension between Tai Wai and Lee On at all time periods during the operational phase.	KCRC's Detailed Design Engineers (Rolling Stock)	✓	Noise Control Ordinance and EIAOTM
K7 #		<i>Additional Mitigation Measures (to Standard Parapet & Retaining Walls) for Railway Noise</i> 7.4 m Cantilever barrier 2 m Noise barrier Enclosure	Hin Keng to Tai Wai Section, approx. chainage 10,000-10,400, down track, installed before the operation of railway Hin Keng to Tai Wai Section, approx. chainage 10,400-10,900, down track, installed before the operation of railway City One Shatin to Shek Mun, approx. chainage 14,587-14,717, down track, installed before the operation of railway	KCRC's Detailed Design Engineers and Construction Contractor(s) KCRC's Detailed Design Engineers and Construction Contractor(s) KCRC's Detailed Design Engineers and Construction Contractor(s)	✓ ✓ ✓	Noise Control Ordinance and EIAOTM Noise Control Ordinance and EIAOTM Noise Control Ordinance and EIAOTM

Implementation Schedule

EIA* Ref.	EM&A Log Ref	Environmental Protection Measures	Location/Duration of Measures/Timing of Completion of Measures	Implementation Agent	Implementation Stage**				Relevant Legislation & Guidelines
					Des	C	O	Dec	
			installed before the operation of railway	Construction Contractor(s)					
		Enclosure	Chevalier Garden to Heng On, approx. chainage 18,565-18,693, down track, installed before the operation of railway	KCRC's Detailed Design Engineers and Construction Contractor(s)	✓				Noise Control Ordinance and EIAOTM
		1.5 m Noise barrier above 2.1 m parapet wall	Heng On to Ma On Shan, approx. chainage 19,480-19,560, down track, installed before the operation of railway	KCRC's Detailed Design Engineers and Construction Contractor(s)	✓				Noise Control Ordinance and EIAOTM
		Enclosure	Ma On Shan to Lee On, approx. chainage 21,010-21,175, down track, installed before the operation of railway	KCRC's Detailed Design Engineers and Construction Contractor(s)	✓				Noise Control Ordinance and EIAOTM
K7a#		Additional Barriers to meet ANL-10dB(A)							
		Full enclosure (to be reviewed in detailed design stage - see K9#)	Hin Keng to Tai Wai Section, approx. chainage 10,000-10,400, down track, installed before operation of the railway	KCRC's Detailed Design Engineers and Construction Contractor(s)	✓				Noise Control Ordinance and EIAOTM
		3m Noise barrier between tracks (to be reviewed in detailed design stage - see K9#)	Hin Keng to Tai Wai Section, approx. chainage 10,000-10,400, down track, installed before operation of the railway	KCRC's Detailed Design Engineers and Construction Contractor(s)	✓				Noise Control Ordinance and EIAOTM
		2m Noise barrier above 2.1 parapet wall (to be reviewed in detailed design stage - see K9#)	Tai Wai to Sha Kok Street Section, approx. chainage 1,400-11,600, down track, installed before operation of the railway	KCRC's Detailed Design Engineers and Construction Contractor(s)	✓				Noise Control Ordinance and EIAOTM
K8 #		Performance Specification of Mitigation Measures							
		Acoustic performance of noise barriers, enclosures and multi-plenum systems shall be designed in accordance with the performance specification given	All the recommended noise barriers, noise enclosures and the multi-plenum system	KCRC's Detailed Design Engineers	✓				Noise Control Ordinance and EIAOTM

Implementation Schedule

EIA* Ref.	EM&A Log Ref	Environmental Protection Measures	Location/Duration of Measures/Timing of Completion of Measures	Implementation Agent	Implementation Stage**	Relevant Legislation & Guidelines
			Des	C	O	Dec
		in this EIA Report (Table Ref. 4.5h, 4.5i and 4.5j) to ensure the acoustic adequacy of the measures.	on viaduct structures.			
K9#		Cumulative Noise Levels With East Rail During the detailed design carry out a review of East Rail retroactive noise mitigation and MOS noise barrier mitigation in the vicinity of the shared corridor at Tai Wai to explore the opportunity to implement a holistic noise barrier scheme for compliance of cumulative noise levels of East Rail and MOS. If an improved solution results from this review, it is KCRC's intention to apply for variation of the future environmental permit.	Tai Wai Depot	KCRC's Detailed Design Engineers	✓	Noise Control Ordinance and EIAOTM
K10 #		Depot And Fixed Plant Noise During the detailed design progresses, noise levels from fixed plant and activities associated with the Depot shall be controlled through the use of standard mitigation (eg noise barrier screening or enclosures). Fixed plant noise sources shall be designed and controlled to achieve the statutory criteria and the "at-source" noise specification is presented in Section 4.5.6 of this EIA Report.	Tai Wai Depot and Stations	KCRC's Detailed Design Engineers	✓	Noise Control Ordinance and EIAOTM
5.7.3	L1	WATER QUALITY - Operational Phase Cooling Water Discharge Whilst not currently considered likely, if water-cooled air conditioning systems are adopted that discharge their cooling water into the Tolo Harbour, there will be the potential for local thermal impacts to the marine water. It is therefore recommended that the	Stations, depot and Tolo Harbour.	KCRC's Detailed Design Engineers	✓	

Implementation Schedule

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					Des C O Dec	
		and maintained in good working order. The efficiency of these installations is dependent on regular cleaning and maintenance;	operational period.	and operational managers		<i>Practice Note for Professional Persons</i> (ProPECC PN 5/93)
		3. On-site drainage shall focus on areas where contaminated effluent may be generated and provide a clear segregation of clean and contaminated effluents;	All areas with the potential for the generation of contaminated effluent long entire MOS alignment (particularly the depot), and throughout its entire operational period.	KCRC's Detailed Design Engineers, contractors, and operational managers	✓ ✓ ✓	<i>Drainage Plans subject to Comment by the EPD, Professional Persons Environmental Consultative Committee, Practice Note for Professional Persons</i> (ProPECC PN 5/93)
		4. Oily contents of oil interceptors shall be collected for recycling, or transferred to an appropriate disposal facility.	At stations, the depot and along the entire MOS alignment, and throughout its entire operational period.	KCRC's Detailed Design Engineers, contractors, and operational managers	✓ ✓ ✓	
L3		<i>Sewage Effluent from Depot and Station Work Force</i>				
		Water quality impacts caused by sewage effluent generated by the work force at the Depot and stations should be effectively controlled through connection to the sewerage system or on-site waste water treatment facilities prior to discharge.	At Depot and stations throughout entire operational periods.	KCRC's Detailed Design Engineers, contractors.	✓ ✓ ✓	Technical Memorandum Standards for Effluents Discharged into Drainage and Sewerage Systems, Inland and Coastal Waters (TM)
L4		1. <i>Sewage from Tai Wai Depot</i>				
		Hard standing surfaces shall be provided for areas which may potentially give rise to contamination of storm water by oil and grease. Runoff and spillage prevention measures should conform with relevant engineering and design standards.	Tai Wai Depot throughout its entire operational period.	KCRC's Detailed Design Engineers, contractors, and operational managers	✓ ✓ ✓	<i>Drainage Plans subject to Comment by the EPD, Professional Persons Environmental Consultative Committee, Practice Note for Professional Persons</i> (ProPECC PN 5/93)
		The acid washing facilities shall be designed to achieve effective neutralisation of acids to TM requirements prior to discharge (for example, via neutralisation tanks). Prudent management	Tai Wai Depot throughout its entire operational period.	KCRC's Detailed Design Engineers, contractors, and operational managers	✓ ✓ ✓	

Implementation Schedule

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					Des C O Dec	
		prevent the escape of spilled fuel oils.				
		Waste oil and other chemicals must be disposed of at the Government Chemical Waste Treatment Facility at Tsing Yi.	Tai Wai Depot throughout its entire operational period.	KCRC's Depot operational managers	✓	Waste Disposal (Chemical Waste) (General) Regulation (Cap 354).
		Drainage and effluent collection and treatment systems shall be specified at the detailed design stage in order to meet the discharge limits stipulated in the TM.	Tai Wai Depot throughout its entire operational period.	KCRC's Detailed Design Engineers, Contractors, and Depot operational managers	✓	EIAO TM
L5		<i>Drainage</i>				
		Drainage mitigation measures shall include:				
		<ul style="list-style-type: none"> • locating the columns of bridge crossings of the Siu Lek Yuen and Tai Shui Hang Nullahs in line with the existing columns of the bridge crossings at Ma On Shan Road for the Tai Shui Hang Nullah and Road D9 Extension for the Siu Lek Yuan nullah; and • storm water drainage, sewer and U-channel diversions to allow for the proposed columns supporting the elevated track, at grade section of track, depot and station development. 	Siu Lek Yuen and Tai Shui Hang Nullahs	KCRC's Detailed Design Engineers and contractors	✓	
		Along the elevated sections of track, the foundations and columns will be strategically located to avoid disturbance to the existing main drainage pipes, culverts and nullahs. A minimum 3 m reserve area to either side of the drains shall be provided to comply with the Drainage Services Department's drainage reserve requirement. If disturbance is	Along all elevated sections of track	KCRC's Detailed Design Engineers and contractors	✓	

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EIA* Ref.	EM&A Log Ref	Environmental Protection Measures	Location/Duration of Measures/Timing of Completion of Measures	Implementation Agent	Implementation Stage**	Relevant Legislation & Guidelines
Des C O Dec						
		unavoidable, any diversion or relocation of local drainage or existing sewers shall comply with both engineering and environmental requirements.				
M1		WASTE - Operational Phase For the operational phase, KCRC shall submit a Waste Management Plan for the operation of the MOS Extension to EPD. The Plan shall describe the arrangements for avoidance, reuse, recovery and recycling, storage, collection, treatment and disposal of different categories of waste to be generated from the operation of the MOS Extension and should take account of the recommended mitigation measures in the EIA report.	Project wide	KCRC	✓	
N1		LANDSCAPE AND VISUAL - Operation Phase Mitigation measures to control, reduce or remove permanent landscape and visual impacts shall include: <ul style="list-style-type: none"> The size and extent of noise barriers shall be reduced as much as possible. Where noise barriers/enclosures are unavoidable, they should be integrated with the viaduct design to create a harmonious whole, or if they are at grade, they should be designed to blend into the surrounding environment as far as possible; Footpath and cycle track diversions should be provided to minimise impact on pedestrian and vehicular movements; 	Project-wide	KCRC's Detailed Design Engineers	✓	EIAO TM
			Project-wide	KCRC's Detailed Design Engineers	✓	EIAO TM

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EIA* Ref.	EM&A Log Ref	Environmental Protection Measures	Location/Duration of Measures/Timing of Completion of Measures	Implementation Agent	Implementation Stage**	Relevant Legislation & Guidelines			
						Des	C	O	Dec
		<ul style="list-style-type: none"> The external appearance of all above-ground structures should be carefully detailed in terms of form, colour and finishes such that they are visually integrated as much as possible into the surrounding landscape. This applies, in particular to the stations, viaduct structures and the proposed noise mitigation structures as these elements would be the most visually dominant elements. The width of the viaduct sides and supporting columns should be minimised as far as possible to provide a 'lightness' of appearance. The form and surface detailing of these structures should be carefully considered to reduce their apparent mass; The use of high safety fences along the railway should be avoided wherever possible to minimise adverse visual intrusion on the landscape. This applies particularly along the central reserve within Ma On Shan Road as this is an area of attractive open landscape; Tree and shrub planting should be implemented within the railway reserve, below the viaduct, in order to compensate for lost trees and to soften the visual impact of the viaduct. Tree species should be selected on the basis of their ultimate height, so that they do not physically interfere with the viaduct, and Climbing plants should be used to soften the appearance of viaduct columns. 	Project wide	KCRC's Detailed Design Engineers	✓	EIAO TM			
			Project-wide (although, particularly along the central reserve within Ma On Shan Road)	KCRC's Detailed Design Engineers	✓	EIAO TM			
			Project-wide	KCRC's Detailed Design Engineers	✓	EIAO TM			
			Project-wide	KCRC's Detailed Design Engineers	✓	EIAO TM			

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EIA* Ref.	EM&A Log Ref	Environmental Protection Measures	Location/Duration of Measures/Timing of Completion of Measures	Implementation Agent	Implementation Stage**				Relevant Legislation & Guidelines
					Des	C	O	Dec	
	O1	HAZARD ASSESSMENT							
11.14		Adopt necessary engineering measures to reduce the effect of stray current corrosion	Prior to the commencement of the operating railway	KCRC	✓	✓	✓		EIAO TM
		Devise procedure for communication of a gas leak/fire to train control centre	Prior to the commencement of the operating railway	KCRC	✓	✓	✓		EIAO TM
12.5	P1	EM&A REQUIREMENTS - Operational Phase							
	#	Noise Monitoring and Maintenance Requirements							
		Monitoring of rolling stock emissions will be required to determine maintenance requirements for vehicles. This will comprise a permanent monitoring location close to the Depot so that noise levels can be attributed to specific rolling stock. As soon as an exceedance of a reference noise level is detected, the fault will be diagnosed for remedial action.	Permanent monitoring location close to the Tai Wai Depot	KCRC			✓		EIAO TM
		Periodic inspection of the track for wear and the presence of corrugation will be undertaken by KCRC track maintenance personnel. Where corrugation is detected, rail grinding will be carried out by the KCRC.	Route-wide	KCRC			✓		EIAO TM

* Des=Design, C=Construction, O=Operation, Dec=Decommissioning

Proposed mitigation measures that should be included as conditions on the Environmental Permit