14. IMPLEMENTATION SCHEDULE AND RECOMMENDED MITIGATION MEASURES

- 14.1 This chapter presents the implementation schedule of the proposed mitigation measures for the Project. **Table 14.1** summarises the details of the mitigation measures for all works areas. For each recommended mitigation measure, both the location and timing for the measure have been clearly identified. As well, the parties responsible for implementing the measure and for maintenance (where applicable) have also been clearly identified.
- 14.2 As mentioned in Section 2.76, an Environmental Report for Variation of Environmental Permit (ER for VEP) Application of "Demolition of Buildings and Structures in Proposed Kennedy Town Comprehensive Development Area Site" submitted by CEDD was approved by EPD under the EIAO in April 2007. Under the VEP, demolition and clearance of buildings and surface structures within the site would be conducted, and a paving layer of not less than 200mm thick would be provided in the site. It would then be handed over to MTRC for site offices and material storage during the construction phase of the WIL project. Mitigation measures regarding the provision of paving layer and construction of site offices have been recommended in the Environmental Report, and are summarized in **Table 14.2**.

Table 14.1 Project Implementation Schedule for All Works Areas

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measure & Main Concern to Address	Who to implement the measure?	Location of the measure	When to implement the measure?	EIA Requirements
Airborne	Noise I	mpact (Construction Phase)					
S 3.54	S 2.23	 The following good site practices shall be implemented: 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 utilized and shall be properly maintained during the construction program Mobile plant, if any, shall be sited as far from NSRs as possible Machines and plant (such as trucks) that may be in intermittent use shall be shut down between work 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 utilized, wherever practicable, in screening noise from on-site construction activities. 		MTRC / Contractor	All works areas	Construction phase	Noise Control Ordinance
S 3.55- 3.56, Table 3.10	S 2.23	Quieter plant shall be used for the following PME: - Truck - Crane/ Mobile Crane - Backhoe/Excavator/Wheel Loader/ Front-end-loader - Breaker - Concrete Mixer Truck - Pokers, vibratory, hand held	To reduce construction noise impacts	MTRC / Contractor	All works areas	Construction phase	Noise Control Ordinance

14-2

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measure & Main Concern to Address	Who to implement the measure?		When to implement the measure?	EIA Requirements
		 Pile Extractor Roller, vibratory Asphalt Paver Hydraulic Breaker Pile Rig Crawler Crane Sheet Pilling Machine/ Piling, Hydraulic 					
S 3.57- 3.58	S 2.23	Movable noise barrier shall be used for the following PME where practicable: - Breaker - Mini Backhoe - Generator, super silenced - Backhoe - Crane - Poker, vibratory, hand-held - Hydraulic Breaker - Wheel Loader - Crusher - Hand Held Breaker - Grout Plant - Grout Mixer - Concrete Pump - Excavator - Lorry Crane - Mobile Crane - Crawler Crane	To reduce construction noise impacts	MTRC / Contractor		Construction phase	Noise Control Ordinance
S 3.59	S 2.23	Noise enclosure/acoustic shed shall be used for the following PME where practicable: - Air Compressor - Concrete Pump - Shotcrete Pump	To reduce construction noise impacts	MTRC / Contractor	All works areas	Construction phase	Noise Control Ordinance

14-3

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measure & Main Concern to Address	Who to implement the measure?	Location of the measure	When to implement the measure?	EIA Requirements
S 3.60	S 2.23	- Hand Held Breaker - Grout Pump - Concrete Corer Acoustic Enclosure shall be used for enclosing the rock drill as fully as possible.	To reduce construction noise impacts	MTRC / Contractor	Works areas H, N1 and M	Construction phase	Noise Control Ordinance
S 3.61	S 2.23	Noise insulating cover shall be used to cover the following PME: - Breaker - Backhoe - Water pump, submersible (electric) - Crawler mounted rock drill trucks - Rock drill - Air compressor - Electric Winch - Concrete pump - Poker, vibratory, hand-held - Hand Held Breaker - Crane - Shotcrete pump	To reduce construction noise impacts	MTRC / Contractor	Works areas J1, N1, M1 and M3	Construction phase	Noise Control Ordinance
S 3.62	S 2.23	Silencer shall be used for the ventilation fan	To reduce construction noise impacts	MTRC / Contractor	Works areas A, C, D, G, H, I, J, J1, J2, J3, L1, M, M1, M3, N1, O1, O2 and O3.	Construction phase	Noise Control Ordinance
S 3.63	S 2.23	Noise insulating fabric shall be applied where practicable to cover the following PME: - Pile Rig - Drill rig - Pile Extractor	To reduce construction noise impacts	MTRC / Contractor		Construction phase	Noise Control Ordinance

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measure & Main Concern to Address	Who to implement the measure?		When to implement the measure?	EIA Requirements
		Power RammerPilling, earth augerPiling, hydraulicSheet Piling Machine			O2 and O3.		
S 3.64	S 2.23	Use of "Noise Control Curtain" - a noise insulating fabric to be mounted on the steel scaffold erected on the buildings to be demolished to an extent such that the line of sight between the noise source and NSR would be blocked	noise impacts	MTRC / Contractor	Works area A	Construction Phase – during the demolition of Block A & C of Kennedy Town Ex- Police Quarter	Noise Control Ordinance
S 3.66- 3.69, Figure 3.17 and 3.18.	S 2.23	Temporary noise barriers shall be erected at the works areas of West of KET Station and SYP Entrance A1 & A2.	To reduce construction noise impacts	MTRC / Contractor	Works areas C and N1	Construction phase	Noise Control Ordinance
S 3.70	S 2.23	Decking over would be provided to cover the excavation area.	To reduce construction noise impacts	MTRC / Contractor	Works areas J, J3, G and L1	Construction phase	Noise Control Ordinance
S3.71	S 2.23	Full enclosure of entire works area	To reduce construction noise impacts	MTRC / Contractor	Works area J2	Construction Phase (after piling is completed)	Noise Control Ordinance
S3.72 – 3.73	S 2.23	Use of concrete crusher instead of hydraulic breaker	To reduce construction noise impacts	MTRC / Contractor	Works area J2, M1 and	Construction Phase	Noise Control Ordinance

14-5

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measure & Main Concern to Address	Who to implement the measure?	Location of the measure	When to implement the measure?	EIA Requirements
					M3		
Airborne	Noise Ir	mpact (Operation Phase)					
S 3.49- 3.50, Table 3.9	Appendix B	The maximum permissible sound power levels (Max SWLs) for the fixed plant shall be complied with during the selection of equipment and mitigation measures.	To comply with the noise criteria of Noise Control Ordinance	MTRC / Contractor	Vent shafts and chiller plants at KET Station, UNI Entrance C1 and SYP Entrance C, and vent shafts at KET Ex-Police Quarter, UNI Vent Shaft-Y and SYP Entrance A1&A2.	Design and operation phases	Noise Control Ordinance
S 3.75	Appendix A	 The following shall be considered as far as possible in the detailed design of fixed plant: 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/louver 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 	To comply with the noise criteria of Noise Control Ordinance	MTRC / Contractor	Vent shafts and chiller plants at KET Station, UNI Entrance C1 and SYP Entrance C, and vent shafts at KET Ex-Police Quarter, UNI Vent Shaft-Y and SYP Entrance	Design and operation phases	Noise Control Ordinance

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measure & Main Concern to Address	Who to implement the measure?	Location of the measure	When to implement the measure?	EIA Requirements
		separate building. - Install direct noise mitigation measures including silencers,			A1&A2.		
		acoustic louvers and acoustic enclosure where necessary.					
Groundb	orne No	ise Impact			-	•	1
S4.91	S3.1		To comply with the noise criteria of Noise Control Ordinance	MTRC / Contractor		Construction phase	Noise Control Ordinance and
S 4.88 & Table 4.10	S 3.2	Type 1a Trackform – Resilient Baseplate with stiffness of about 25 KN/mm shall be installed at both the west- and east-bounds starting from turnout in proximity of Hongway Garden towards the Sai Ying Pun Station and also the alignment under Po Shu Lau to Sai Wan Estate. A commissioning test shall be included in the Contract document in order to ensure compliance of the operational ground-borne noise criteria.	To comply with the noise criteria of Noise Control Ordinance	MTRC	Tunnel alignment	Operation phase	Noise Control Ordinance
Landsca	pe and \	/isual Impact (Construction Phase)					
	Table 4.2	Re-use of Existing Soil Existing topsoil shall be re-used where possible for new planting areas within the project. The construction program shall consider using the soil removed from one phase for backfilling another. Suitable storage ground, gathering ground and mixing ground may be set up on-site as necessary.	soil for disposal	MTRC / Contractor	All Works areas	Construction phase	EIA Recommendation
	Table 4.2	No-intrusion Zone To maximize protection to existing trees, ground vegetation and the associated understory habitats, construction contracts may designate "No-intrusion Zone" to various areas within the site boundary with rigid and durable fencing for each individual no-	understory habitats.	MTRC / Contractor	All Works areas	Construction phase	EIA Recommendation

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measure & Main Concern to Address	Who to implement the measure?	Location of the measure	When to implement the measure?	EIA Requirements
		intrusion zone. The contractor should close monitor and restrict the site working staff not to enter the "no-intrusion zone", even for non-direct construction activities and storage of equipment.					
Table 5.4	Table 4.2	Decorative Hoarding Erection of decorative screen hoarding should be designed to be compatible with the existing urban context.	To reduce visual impact due to construction	MTRC / Contractor	All Works areas	Construction phase	EIA Recommendation
Table 5.4	Table 4.2	Minimize light pollution and control of night-time glare All security floodlights for construction sites shall be equipped with adjustable shield, frosted diffusers and reflective covers, and be carefully controlled to minimize light pollution and night-time glare to nearby residences and GIC users. The Contractor shall consider other security measures which shall minimize the visual impacts.		MTRC / Contractor	All Works areas	Construction phase	EIA Recommendation
Table 5.4	Table 4.2	Aesthetic design of the conveyor belt system The removal of excavated material requires installation of a conveyor and a barging point. The conveyor will be covered, except the portion where it meets the barging point. The aim of covering or enclosing the conveyor is to avoid noise and air quality issues; however, the conveyor where above-ground should be adequately screened and /or constructed of suitable materials and in colours/tones that minimize visual intrusion.	issues	MTRC / Contractor	Works areas E & F	Construction phase	EIA Recommendation
Table	Table	Protection of Retained Trees	To protect the retained trees within the site	MTRC /	All Works	Construction	EIA

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measure & Main Concern to Address	Who to implement the measure?	Location of the measure	When to implement the measure?	EIA Requirements
5.4	4.2	All retained trees should be recorded photographically at the commencement of the Contract, and carefully protected during the construction period. Detailed tree protection specification shall be allowed and included in the Contract Specification, which specifying the tree protection requirement, submission and approval system, and the tree monitoring system. In addition, the Contractor shall be required to submit, for approval, a detailed working method statement for the protection of trees prior to undertaking any works adjacent to all retained trees, including trees in contractor's works areas. All implementation of tree protection works and tree preservation measures shall be supervised by a landscape specialist on site.		Contractor	areas	phase	Recommendation
Table 5.4	Table 4.2	Protection of Registered Old and Valuable Trees Detailed tree protection measures as stipulated in WBTC No. 29/2004 – Registration of Old and Valuable Trees, and Guidelines for their Preservation, shall be allowed and included in the Contract Specification. All implementation of OVT protection measures shall be supervised by a landscape specialist on site.		MTRC / Contractor	All Works areas	Construction phase	WBTC No. 29/2004 EIA Recommendation
Table 5.4	Table 4.2	Protection of Old Stone Wall-cum-trees Detailed tree protection specification shall be allowed and included in the Contract Specification, which specifying the tree protection requirement, submission and approval system, and the tree monitoring system. All implementation of Old stone wall-cumtrees protection measures shall be supervised by a landscape specialist on site.		MTRC / Contractor	All Works areas		EIA Recommendation

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measure & Main Concern to Address	Who to implement the measure?	Location of the measure	When to implement the measure?	EIA Requirements
Landsca	pe and \	 /isual Impact (Operation Phase)					
	Table 4.3	Tree Transplanting Trees of high to medium survival rate after transplanting to be affected by the works shall be transplanted where possible and practicable. Tree transplanting proposal including final location for transplanted trees will be submitted separately to seek relevant government department's approval.		MTRC / Contractor	All Works areas	Detail design and operation phase	EIA Recommendation
Table 5.5	Table 4.3	Compensation Tree Planting Compensatory tree planting should be provided to compensate for felled trees. Compensatory tree planting proposal including location of compensation will be submitted separately to seek relevant government department's approval.		MTRC / Contractor	All Works areas	Detail design and operation phase	WBTC no. 3/2006 —Tree Preservation. EIA Recommendation
Table 5.5	Table 4.3	Aesthetic landscape and architectural treatment on Station / Entrance / vent shaft All station entrances, vent shafts and all above ground structures shall be sensitively designed to ensure the element with colour, texture and tonal quality being compatible to the existing urban context, which shall include tree planting where space permits, to minimize the potential adverse landscape and visual impacts. For example, roof greening and vertical greening would be applied where possible subject to technical operational and maintenance constraints.	and minimize the landscape and visual impacts.	MTRC / Contractor	Stations / Entrances / Vent Shafts		EIA Recommendation

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measure & Main Concern to Address	Who to implement the measure?	Location of the measure	When to implement the measure?	EIA Requirements
	Table 4.3	Re-instatement of excavated Area All excavated area and disturbed area for utilities diversion, temporary road diversion, and pipeline woks shall be reinstated to former conditions or even better, to the satisfaction of the relevant Government departments.	'	MTRC / Contractor	All Works areas	Operation phase	EIA Recommendation
	Table 4.3	Re-provision of public open space Every effort should be made to so that no public open space would be unnecessarily affected by the Project and if affected, they should be reprovided as far as possible and practicable. Sensitive design and reprovision of the affected Public Open Space (Forbes Street Playground, Hill Road Rest Garden, Ki Ling Lane Children's Playground, Mui Fong Street Children Playground, Sai Woo Lane Playground, Centre Street Market Sitting-out Area, King George V Memorial Park) incorporating replacement facilities for those provided at present, using materials of quality suitable for long term use and acceptable to relevant Government authority. Relevant government departments including LCSD and PlanD should be consulted on the design of the reprovisioned public open spaces at the early stage of the design process.	and facilities	Contractor	All Works areas	Operation phase	EIA Recommendation
Cultural	Heritage	e Impact (Construction Phase)	L	I			l.
S6.45,	_	The construction vibration control limits shall be followed. Compliance monitoring of vibration limits shall be conducted and	To minimize vibration impacts on the identified vibration sensitive	MTRC / Contractor	All Works Areas		Antiquities and Monuments

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measure & Main Concern to Address	Who to implement the measure?	Location of the measure	When to implement the measure?	EIA Requirements
6.55		reported as a requirement of EM&A programme	historical buildings.			operational phase	Ordinance
		The location and installation of the monitoring stations should be discussed and agreed with AMO before installation.				priase	
S6.46	S5.3	Hoardings or boundary fencing shall be designed in a manner that responds to the existing urban context.	To minimize visual impacts	MTRC / Contractor	All Works Area	Detailed design and operational phase	Antiquities and Monuments Ordinance
	S5.12- 5.14	Archaeological watching brief shall be conducted for the identification of any historical finds in the directly impacted works areas which might have a potential for finds and remains of archaeological interest to be found. Details of the frequency of inspection shall be provided to AMO for review and comment once the detailed construction programme has been finalized. The inspection should be carried out by the qualified archaeologist who have applied to the Antiquities Authority for a License	To indentify any historical finds in the works areas	MTRC / Qualified Archaeologist		Construction phase	Antiquities and Monuments Ordinance
Cultural	Heritage	Elmpact (Operation Phase)					
Table 6.2	5.3	Aboveground structures shall be designed in a manner that responds to the existing urban context.	To minimize visual impacts	MTRC / Contractor	Stations / Entrances / Vent Shafts	Detail design and operation phase	EIA Recommendation
S6.60	S 5.15	Recommended measures for mitigating operational phase landscape and visual impacts shall be implemented.	To minimize potential visual impact on heritage sites	MTRC / Contractor	Stations / Entrances / Vent Shafts	Detail design and operational phase	EIA Recommendation
Waste M	lanagem	ent Implications (Construction Phase)		•	•	•	
S7.30	S 6.5	 Good site practices Nomination of an approved person, such as a site manager, to be responsible for good site practices, arrangements for 	To reduce waste management impacts	MTRC / Contractor	All works areas	Construction phase	Practice Note for Authorized Person and Registered

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measure & Main Concern to Address	Who to implement the measure?	Location of the measure	When to implement the measure?	EIA Requirements
		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 handling procedures - Provision of sufficient waste disposal points and regular collection of waste - 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. - Separation of chemical wastes for special handling and appropriate treatment at the Chemical Waste Treatment Centre.					Structural Engineers, Building Department Waste Disposal (Chemical Waste) (General) Regulation (Cap 354), Land (Miscellaneous Provision) Ordinance (Cap 28); Waste Disposal Ordinance (Cap 354)
S7.31 & S7.32	S 6.6 – S 6.7	Sort C&D waste from demolition of existing facilities 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 by providing separate labelled bins to enable this waste to be segregated from other general refuse generated by the work force	To achieve waste reduction	MTRC / Contractor	All works areas	Construction phase	Practice Note for Authorized Person and Registered Structural Engineers, Building Department Waste Disposal (Chemical Waste) (General) Regulation (Cap

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measure & Main Concern to Address	Who to implement the measure?	Location of the measure	When to implement the measure?	EIA Requirements
		 Proper storage and site practices to minimise the potential for damage or contamination of construction materials Plan and stock construction materials carefully to minimise amount of waste generated and avoid unnecessary generation of waste. A recording system for the amount of wastes generated, recycled and disposed (including disposal sites) should be proposed Training should be provided to workers about the concepts of site cleanliness and appropriate waste management procedures, including waste reduction, reuse and recycle. A Waste Management Plan shall be prepared by the Contractor prior to the commencement of construction work to provide an overall framework for waste management and reduction. 					354), Land (Miscellaneous Provision) Ordinance (Cap 28); Waste Disposal Ordinance (Cap 354)
S7.34 & S7.35	S 6.9 & S6.10	- In order to minimise impacts resulting from collection and transportation of C&D material for off-site disposal, the excavated materials arising from station and tunnel construction shall be reused on-site as backfilling material and for landscaping works as far as practicable. - Surplus rock generated from the tunnelling works, shafts/adits construction and the stations cavern construction should be reused in reclamation and site formation projects either in the Mainland or Macau, or disposed of at a PFRF, as agreed with the Secretary of the	To minimize environmental impacts during the handling, transportation and disposal of C&D material	MTRC / Contractor	All works areas	Construction phase	ETWB TCW No. 31/2004 ETWB TCW No. 33/2002 ETWB TCW No. 19/2005

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measure & Main Concern to Address	Who to implement the measure?		When to implement the measure?	EIA Requirements
S7.36	S 6.11	Public Fill Committee, for other beneficial uses. - C&D waste generated site clearance from the proposed works areas would require disposal to the designated landfill site. - In order to monitor the disposal of inert C&D material and C&D waste at PFRFs and landfills, respectively, and to control fly-tipping, a trip-ticket system shall be established in accordance with ETWB TCW No. 31/2004. - Material delivered to PFRFs should be of size less than 250mm or other sizes as agreed with the Secretary of the Public Fill Committee. - General refuse - General refuse shall be stored in enclosed bins or compaction units separate from C&D material and chemical wastes. - A reputable waste collector shall be employed by the contractor to remove general refuse from the site, separately from C&D material and chemical wastes. Preferably an enclosed and covered area shall be provided to reduce the	To minimize environmental impacts during the handling, transportation and disposal of general refuse	MTRC / Contractor	All works areas	Construction	Public Health and Municipal Services Ordinance (Cap. 132)
S7.37	S 6.12	chemical waste - Contractor would be required to register with the EPD as a chemical waste producer and to follow the guidelines stated in the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes.	To minimize environmental impacts during the handling, transportation and disposal of chemical refuse	MTRC / Contractor	All works areas	Construction phase	Waste Disposal (Chemical Waste) (General) Regulation Code of Practice on the Packaging,

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measure & Main Concern to Address	Who to implement the measure?	Location of the measure	When to implement the measure?	EIA Requirements
		 Good quality containers compatible with the chemical wastes shall be used, and incompatible chemicals shall be stored separately. Appropriate labels shall be securely attached on each chemical waste container indicating the corresponding chemical characteristics of the waste, such as explosive, flammable, oxidizing, irritant, toxic, harmful, corrosive, etc. The Contractor shall use a licensed collector to transport and dispose of the chemical wastes, either to the approved Chemical Waste Treatment Centre, or another licensed facility, in accordance with the Waste Disposal (Chemical Waste) (General) Regulation. 					Labelling and Storage of Chemical Waste
Waste M	lanagem	ent Implications (Operation Phase)	,				
S7.39	S 6.11	General Refuse and Industrial Waste • A reputable waste collector should be employed to remove general refuse and industrial wastes from the stations on a daily basis to minimise odour, pest and litter impacts.	Storage and handling of waste	MTRC	Stations and entrances	Operational stage	Public Health and Municipal Services Ordinance (Cap. 132)
S7.40	S 6.12	 Chemical Waste The requirements given in the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes should be followed in handling of these chemical wastes. A trip-ticket system should be operated in accordance with the Waste Disposal (Chemical Waste) (General) Regulation to monitor all movements of chemical wastes which would be collected by a licensed collector to a licensed facility for 	Storage and handling of the chemical waste to avoid environmental and health hazard	MTRC	Stations and entrances	Operational stage	Waste Disposal (Chemical Waste) (General) Regulation Code of Practice on the Packaging, Labelling and Storage of Chemical Waste

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measure & Main Concern to Address	Who to implement the measure?	Location of the measure	When to implement the measure?	EIA Requirements
		final treatment and disposal. The guidelines covered under the construction phase mitigation of chemical wastes should be referred.					
Water Q	uality Im	pact (Construction Phase)		•	•		
S9.31	S 8.4	Construction Site Run-off and Drainage The site practices outlined in ProPECC PN 1/94 "Construction Site Drainage" should be followed as far as practicable in order to minimise surface runoff and the chance of erosion. The following measures are recommended to protect water quality and sensitive uses of the coastal area i.e. WSD flushing water intakes along the harbour front, and when properly implemented should be sufficient to adequately control site discharges so as to avoid water quality impacts: - At the start of site establishment (including the barging facilities), perimeter cut-off drains to direct off-site water around the site shall be constructed with internal drainage works and erosion and sedimentation control facilities implemented. Channels (both temporary and permanent drainage pipes and culverts), earth bunds or sand bag barriers shall be provided on site to direct stormwater to silt removal facilities. The design of the temporary on-site drainage system would be undertaken by the contractor prior to the commencement of construction. - The dikes or embankments for flood protection should be implemented around the boundaries of earthwork areas. Temporary ditches should be provided to facilitate the runoff discharge into an appropriate watercourse, through a		MTRC / Contractor	All works areas	Construction phase	ProPECC PN 1/94 Construction Site Drainage

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measure & Main Concern to Address	Who to implement the measure?	Location of the measure	When to implement the measure?	EIA Requirements
		incorporated in the permanent drainage channels to enhance deposition rates					
		- Sand/silt removal facilities such as sand/silt traps and sediment basins shall be provided to remove sand/silt particles from runoff to meet the requirements of the TM standards under the WPCO. The design of efficient silt removal facilities shall be based on the guidelines in Appendix A1 of ProPECC PN 1/94, which states that the retention time for silt/sand traps shall be 5 minutes under maximum flow conditions. Sizes may vary depending upon the flow rate, but for a flowrate of 0.1m³/s a sedimentation basin of 30m³ would be required and for a flow rate of 0.5 m³/s the basin would be 150m³. The detailed design of the sand/silt traps shall be undertaken by the contractor prior to the commencement of construction.					
		- 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 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.					
		- Measures shall be taken to minimize the ingress of site drainage into excavations. If excavation of trenches in wet periods is necessary, they should be dug and backfilled in short sections wherever practicable. Water pumped out from foundation excavations shall be discharged into storm drains via silt removal facilities.					
		- If surface excavation works cannot be avoided during the					

Concern to Address measure? measure?	equirements
wet season (April to September), temporarily exposed slope/soil surfaces shall be covered by a tarpaulin or other means, as far as practicable, and temporary access roads shall be protected by crushed stone or gravel, as excavation proceeds. Interception channels shall be provided (e.g., along the crest' edge of the excavation) to prevent storm runoff from washing across exposed soil surfaces. Arrangements shall 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. - The overall slope of the site should be kept to a minimum to reduce the erosive potential of surface water flows, and all trafficked areas and access roads protected by coarse stone ballast. An additional advantage accruing from the use of crushed stone is the positive traction gained during prolonged periods of inclement weather and the reduction of surface sheet flows - All vehicles and plant shall 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 sited wheel washing facility shall be provided at every construction site exit where practicable. Wash-water shall have sand and sit 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 roads shall be paved with sufficient backfill toward the wheel-wash bay to prevent vehicle tracking of soil and slity water to public roads and	

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measure & Main Concern to Address	Who to implement the measure?	Location of the measure	When to implement the measure?	EIA Requirements
		 Open stockpiles of construction materials or construction wastes on-site 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. 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. Precautions be taken at any time of year when rainstorms 					
		are likely, actions to be taken when a rainstorm is imminent or forecasted, 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, especially for areas located near steep slopes.					
		- Bentonite slurries used in diaphragm wall construction shall be reconditioned and reused wherever practicable. Temporary enclosed storage locations shall be provided onsite for any unused bentonite that needs to be transported away after all the related construction activities are completed. The requirements in ProPECC PN 1/94 shall be adhered to in the handling and disposal of bentonite slurries.					
S9.32 & S9.33	S 8.5 8 S 8.6	General Construction Activities - Construction solid waste, debris and refuse generated on-site shall be collected, handled and disposed of properly to avoid		MTRC / Contractor	All works areas	Construction phase	EIA Recommendation

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measure & Main Concern to Address	Who to implement the measure?	Location of the measure	When to implement the measure?	EIA Requirements
		entering any nearby stormwater drain. Stockpiles of cement and other construction materials shall be kept covered when not being used. Requirements of the solid waste management are described in Section 7 of this EIA Report.					
		- Oils and fuels shall only be used and stored in designated areas which have pollution prevention facilities. To prevent spillage of fuels and solvents to nearby stormwater drain, 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.					
S9.34	S 8.7	Sewage from Construction Workforce - Temporary sanitary facilities, such as portable chemical toilets, shall be employed on-site where necessary to handle sewage from the workforce. A licensed contractor should be employed to provide appropriate and adequate portable toilets and would be responsible for appropriate disposal of waste matter and maintenance of these facilities.		MTRC / Contractor	All works areas with on-site sanitary facilities	Construction phase	Water Pollution Control Ordinance
S9.35	S 8.8	Tunnelling Wastewater Discharge Wastewater with a high level of suspended solids should be treated before discharge by settlement in tanks with sufficient retention time. Oil interceptors would also be required to remove the oil, lubricants and grease from the wastewater. In case of very high levels of suspended solids, an on-site pre-packaged treatment plant may be required with the addition of flocculants to improve the settlement of solids. A discharge licence under the WPCO would be required for discharge to the stormwater drain. It may be a stipulation of the WPCO licence to require the Contractor to monitor the quality / quantity of the discharge to show compliance with the conditions of the licence.		MTRC / Contractor	All works areas with tunneling works	Construction phase	Water Pollution Control Ordinance

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measure & Main Concern to Address	Who to implement the measure?	Location of the measure	When to implement the measure?	EIA Requirements
S9.36	S8.9	Groundwater Monitoring Monitoring of groundwater table shall be conducted on a weekly basis and recharge wells will be installed.	To control the potential impact on tree walls at Forbes Street due to groundwater drawdown induced by tunneling	MTRC / Contractor	Works Areas C & D	Construction phase	EIA Recommendation
Water Q	uality Im	pact (Operation Phase)	<u> </u>				
S9.27	\$8.10- \$8.11	Runoff from Rail Track and operational tunnel drainage The tunnel wall would be equipped with water-tight liner and designed for no seepage. Standard designed silt trap or grease trap (if necessary) and oil interceptor would be provided to remove the oil, lubricants, grease, silt and grit from the tunnel runoff before discharge into stormwater drainage.		MTRC	Tunnels and rail tracks	Operation phase	Water Pollution Control Ordinance
S9.37	S8.12- S8.14	 Track drainage channels discharge should pass through oil/grit interceptors/chambers to remove oil, grease and sediment before being pumped to the public stormwater drainage system. The silt traps and oil interceptors should be cleaned and maintained regularly. Oily contents of the oil interceptors should be transferred to an appropriate disposal facility, or to be collected for reuse, if possible. 					
S9.27	S8.15-	Sewage from Station - Sewage and wastewater effluents generated from the staff at	To control sewage from stations	MTRC	WIL Stations	Operation phase	Water Pollution Control

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measure & Main Concern to Address	Who to implement the measure?	Location of the measure	When to implement the measure?	EIA Requirements
	S8.16	stations and food and beverage outlets, if any, would be connected to the existing foul sewerage system. - Runoff from cleaning activities at the stations which would enter floor drains would also be connected to the foul sewer.					Ordinance
Air Qual	ity (Cons	struction Phase)		1	1	•	
	Table 9.5	Rock Crushing Plants The unloading process would be undertaken within enclosed rock crushing facility. Water spraying would be provided at the unloading point. The crushing process is the secondary crushing. The rock crushing plant is enclosed and water spraying system would be installed. Dust extraction and collection system with 80% dust removal efficiency would be provided. The crushed stone/rock would be screened by the screening and sorting facility before transporting to the temporary stockpile via enclosed conveyor. Water spraying system would be installed. Dust extraction and collection system with 80% dust removal efficiency would be provided.	To minimize dust impacts	MTRC / Contractor	Rock crushing plants at works areas B and E	Construction phase	Air Pollution Control Ordinance Guideline Note on the Best Practicable Means for Mineral Works (Stone Crushing Plants) BPM 11/1
Table 11.7	Table 9.6	Temporary Stockpiles Kennedy Town Abattoir Site: Loading point – Loading of crushed materials from rock crushing facility onto stockpile The transportation would be via an enclosed conveyor belt system and water spraying and flexible dust curtains would be provided at the loading point to suppress the dust impact. Storage of materials - Active area for loading & unloading	To minimize dust impacts	MTRC / Contractor	Temporary stockpiles at works areas B and E	Construction phase	Air Pollution Control Ordinance

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measure & Main Concern to Address	Who to implement the measure?	Location of the measure	When to implement the measure?	EIA Requirements
		materials					
		The active area would be minimized to 20% of the total area of the stock piles. The 80% inactive area would be well covered with impervious sheeting. Water spraying system would be applied on the active area and watering with complete coverage of active area four times a day would be required.					
		Transportation of materials to Barging Point 1					
		 Wheel wash facilities provided at the site exit. The vehicles would be washed before leaving the stockpiles. The spoils would also be well covered before leaving the site in order to minimise generation of dusty materials. 					
		 The haul roads within the site would be all paved and water spraying would be provided to keep the wet condition. 					
		Western PCWA:					
		Loading point – Loading of crushed materials from rock crushing facility onto stockpile					
		 The transportation would be via an enclosed conveyor belt system and water spraying and flexible dust curtains would be provided at the loading point to suppress the dust impact. 					
		Storage of materials - Active area for loading & unloading materials					
		 Water spraying system would be applied on the active area and watering with complete of active area four times a day would be required. 					
		Transportation of materials to Barging Point 2					
		- The vehicles would be washed before leaving the stockpiles. The spoils would also be well covered before leaving the site					

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measure & Main Concern to Address	Who to implement the measure?	Location of the measure	When to implement the measure?	EIA Requirements
		in order to minimise generation of dusty materials.					
		- The haul road would be paved and water spraying would be provided to keep the wet condition					
Table	Table	Barging Facilities	To minimize dust	MTRC / Contractor	Barging	Construction	Air Pollution
11.8	9.7	Kennedy Town Abattoir Site	impacts		points at works areas B and E	phase	Control Ordinance
		Transportation of spoils to Barging Point 1					
		 All road surfaces within the barging facilities would be paved and water spraying would be provided to keep the wet condition. 					
		Unloading of spoil materials					
		- The unloading process would be undertaken within enclosed tipping hall. Flexible dust curtains and water spraying would be provided at the discharge point for dust suppression.					
		Vehicles leaving the barging facility					
		- Vehicle wheel washing facilities provided at site exit					
		Western PCWA					
		Transportation of spoils to Barging Point 2					
		 All road surfaces within the barging facilities would be paved and water spraying would be provided to keep the wet condition. 					
		Unloading of spoil materials from trucks to Barging Point 2					
		- The unloading process should be undertaken within the enclosed tipping hall. Flexible dust curtains and water spraying would be provided at the discharge point for dust suppression.					
		Unloading of spoil materials from enclosed tipping hall to Barging					

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measure & Main Concern to Address	Who to implement the measure?	Location of the measure	When to implement the measure?	EIA Requirements
Table 11.9	S 9.26	Point 3 The tipping hall would be enclosed structure. The conveyor from tipping hall to the Barging Point 3 would be enclosed. Water spraying and flexible dust curtains would be provided at the receiving point of the tipping hall. Flexible dust curtains and water spraying would be provided at the discharge point of barging facilities for dust suppression. Vehicles leaving the barging facility Vehicle wheel washing facilities provided at site exit Rock Crushing Plant at Kennedy Town Abattoir Site Dust extraction and collection system (80% dust removal efficiency) should be installed at the rock crushing facility and the discharge point is located at least 39m away from the west boundary of the rock crushing facility under the preliminary design	To minimize dust impacts	MTRC / Contractor	Rock Crushing Plant at works area B - Kennedy Town Abattoir Site	Construction	Air Pollution Control Ordinance Guidance Note on the Best Practicable Means for Mineral
Table 11.10	S 9.27	Works areas at KET station construction site Active operating area of 50% Watering four times a day with complete coverage of active construction area	To minimize dust impacts	MTRC / Contractor	Works area A, C and D	Construction phase	Works (Stone Crushing Plants) BPM 11/1 Air Pollution Control Ordinance
S 11.41	S 9.28	For both rock crushing plants, the requirements and mitigation measures stipulated in the <i>Guidance Note on the Best Practicable Means for Mineral Works (Stone Crushing Plants) BPM 11/1</i> should be followed and implemented.	impacts	MTRC / Contractor	Rock crushing plants	Construction phase	APCO

S 11.41 S 9.28 Dust suppression measures stipulated in the Air Pollution Control (Construction Dust) Regulation and good site practices; Use of regular watering, with complete coverage, to reduce dust emissions from exposed site surfaces and unpaved roads, particularly during dry weather. Use of frequent watering for particularly dusty construction areas and areas close to ASRs. Side enclosure and covering of any aggregate or dusty material storage piles to reduce emissions. Where this is not practicable owing to frequent usage, watering shall be applied to aggregate fines. Open stockpiles shall be avoided or covered. Where possible, prevent placing dusty material storage piles near ASRs. Tarpaulin covering of all dusty vehicle loads transported to, from and between site locations. Establishment and use of vehicle wheel and body washing facilities at the exit points of the site. Provision of wind shield and dust extraction units or similar dust mitigation measures at the loading points, and use of water sprinklers at the loading area where dust generation is likely during the loading process of loose material, particularly in dry seasons/periods.	EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measure & Main Concern to Address	Who to implement the measure?	Location of the measure	When to implement the measure?	EIA Requirements
- Imposition of speed controls for vehicles on unpaved site roads. 8 kilometers per hour is the recommended limit. - Where possible, routing of vehicles and positioning of	S 11.41	S 9.28	 (Construction Dust) Regulation and good site practices: Use of regular watering, with complete coverage, to reduce dust emissions from exposed site surfaces and unpaved roads, particularly during dry weather. Use of frequent watering for particularly dusty construction areas and areas close to ASRs. Side enclosure and covering of any aggregate or dusty material storage piles to reduce emissions. Where this is not practicable owing to frequent usage, watering shall be applied to aggregate fines. Open stockpiles shall be avoided or covered. Where possible, prevent placing dusty material storage piles near ASRs. Tarpaulin covering of all dusty vehicle loads transported to, from and between site locations. Establishment and use of vehicle wheel and body washing facilities at the exit points of the site. Provision of wind shield and dust extraction units or similar dust mitigation measures at the loading points, and use of water sprinklers at the loading area where dust generation is likely during the loading process of loose material, particularly in dry seasons/ periods. Imposition of speed controls for vehicles on unpaved site roads. 8 kilometers per hour is the recommended limit. 	impacts				Control Ordinance and Air Pollution Control (Construction

EIA Ref.	EM&A Ref.		Measure & Main	Who to implement the measure?	Location of the measure	When to implement the measure?	EIA Requirements
		construction plant shall be at the maximum possible distance from ASRs. - Every stock of more than 20 bags of cement or dry pulverised fuel ash (PFA) shall be covered entirely by impervious sheeting or placed in an area sheltered on the top and the 3 sides. - Cement or dry PFA delivered in bulk shall be stored in a closed silo fitted with an audible high level alarm which is interlocked with the material filling line and no overfilling is allowed. - Loading, unloading, transfer, handling or storage of bulk cement or dry PFA shall be carried out in a totally enclosed system or facility, and any vent or exhaust shall be fitted with an effective fabric filter or equivalent air pollution control system.					

Table 14.2 Implementation Schedule Specific for Works Area B – Kennedy Town Abattoir and Incinerator Area

Recommended Mitigation Measures	Objectives of the Recommended Measure & Main Concern to Address	Who to implement the measure?	the measure		Reference
The existing ground slab/pavement within the works area shall be kept intact.		MTRC / Contractor	Works Area B	Construction phase	ER for VEP Recommendation
A reinforced concrete paving of no less than 200mm thick for the cleared site shall be provided after the demolition and clearance works. A debonding layer shall be placed between the existing and new concrete slabs to allow the latter to be removed prior to the former.	associated with the contaminated soil and groundwater in the works area.	Contractor	Works Area B	Construction phase	ER for VEP Recommendation
Monthly site inspection shall be conducted to ensure the integrity of the existing and/or the new paving layer. Any surface cracks identified shall be filled out such that underneath soil would not be exposed.	associated with the	MTRC / Contractor	Works Area B	Construction phase	ER for VEP Recommendation
A clear void between the structure slab of the site office and the ground surface shall be created, i.e. the site office is a raised structure.		MTRC / Contractor	Works Area B		ER for VEP Recommendation
Incorporate gas-resistant membranes into the raised floor of the site office.	To prevent contaminant vapour under the floor slab from entering the site office to protect the staff working in the site office.	MTRC / Contractor	Works Area B		ER for VEP Recommendation
Site hoardings shall be erected around the works area, and they shall be properly maintained to restrict access of trespassers.	To protect the trespassers from the contaminated soil and groundwater in the works area.	MTRC / Contractor	Works Area B	Construction phase	ER for VEP Recommendation