

APPENDIX A IMPLEMENTATION SCHEDULE OF RECOMMENDED MITIGATION MEASURES

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Appendix A1 Implementation Schedule for Air Quality Control

EIA Ref #	Environmental Measures	Protection	Measures / Mitigation	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
						Des	C	O	Dec	
3.102	<p><u>Construction & Demolition Phase</u></p> <p>Implementation of dust suppression measures stipulated in Air Pollution Control (Construction Dust) Regulation:</p> <ul style="list-style-type: none"> • skip hoist for material transport should be totally enclosed by impervious sheeting; • every vehicle should be washed to remove any dusty materials from its body and wheels before leaving a construction site; • the area where vehicle washing takes place and the section of the road between the washing facilities and the exit point should be paved with concrete, bituminous materials or hardcores; • where a site boundary adjoins a road, streets or other accessible to the public, hording of not less than 2.4m high from ground level should be provided along the entire length except for a site entrance or exit; • every stack of more than 20 bags of cement should be covered entirely by impervious sheeting places in an area sheltered on the top and the 3 sides; • all dusty materials should be sprayed with water prior to any loading, unloading or transfer operation so as to maintain the dusty materials wet; • the excavation area should be limited to as small in size as possible and backfilled with clean and/or treated soil shortly after excavation work; • the height from which excavated materials are dropped should be controlled to a minimum practical height to limit fugitive dust generation from unloading; • the load of dusty materials carried by vehicle leaving a construction site should be covered entirely by clean impervious sheeting to ensure dust materials do not 		Works Sites / During Construction Phase	Contractor		√			EIAO-TM	

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3.91	<ul style="list-style-type: none"> leak from the vehicle; and implementation of an environmental monitoring and auditing program to monitor the construction process in order to enforce controls and modify method of works if dusty conditions arise. <p>Implementation of precautionary and mitigation measures for removal of Asbestos Containing Material stipulated in Air Pollution Control Ordinance:</p> <ul style="list-style-type: none"> enclosure of the work area; containment and sealing for the asbestos containing waste; provision of personal decontamination facilities; use of personal decontamination facilities; use of personal respiratory/protection equipment; use of vacuum cleaner fitted with a high efficiency particulate air filter for cleaning up the works area; and carrying out air quality monitoring during the asbestos abatement works. 										APCO	
S3.8 – S3.22 and 3.77	<p><u>Operation Phase</u></p> <ul style="list-style-type: none"> Although the final selection of cremation technology and air pollution control system would be subject to open tendering procedure, the performance and specifications of the new cremators and air pollution control system shall fully comply with target emission limits and the BPM12/2(06); Use of towngas as burning fuel for the new cremators; and Adoption of flue gas treatment system for joss paper burners. 					Cremators / During Operation Phase	Contractor	√		√		APCO
3.108	<ul style="list-style-type: none"> The monitoring of the air pollutants shall comply with the requirements of BPM and future Specified Process 									√		APCO

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			License of new crematorium, to be issued by EPD under the APCO.							

All recommendations and requirements resulted during the course of EIA/EA Process, including ACE and / or accepted public comment to the proposed project.

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

Appendix A2 Implementation Schedule for Waste Management

EIA Ref #	Environmental Protection Measures/Mitigation Measures	Location/ Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S.4.58	<p><u>Construction & Demolition Phase</u></p> <p><u>Good Site Practice</u></p> <ul style="list-style-type: none"> Obtain relevant waste disposal permits from the appropriate authorities, in accordance with the Waste Disposal Ordinance (Cap. 354), Waste Disposal (Chemical Waste) (General) Regulation (Cap. 354) and the Land (Miscellaneous Provision) Ordinance (Cap. 28) Prepare a Waste Management Plan approved by the Engineers / Supervising Officer of the Project based on current best practice on Construction Site Use waste licensed collector to collect waste Establish trip ticket system as contractual requirement with reference to ETWB(W) No. 31/2004 for monitoring of public fill and C&D waste at public filling facilities and landfills. Provide training to site staff in terms of proper waste management and chemical waste handling procedures Separate chemical wastes for special handling and dispose them at licensed facility for treatment Provide sufficient waste disposal points and regular collection for disposal Establish recording system for the amount of wastes generated, recycled and disposed of 	Project site / design, construction and demolition phase	Contractor	√	√			Waste Disposal Ordinance (Cap. 354) Waste Disposal (Chemical Waste) (General) Regulation Waste Disposal (Charges for Disposal of Construction Waste) Regulation ETWBTC(W) 19/2005 ETWB(W) No. 31/2004
S.4.59	<p><u>Environmental Management Plan</u></p> <ul style="list-style-type: none"> The ETWB TCW No.19/2005 "Environmental Management on Construction" includes procedures on waste management requiring contractors to reduce the C&D material to be disposed of during the course of 	Project site / design, construction and demolition phase	Contractor	√	√	√		ETWBTC(W) 19/2005

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S.4.60	<p>construction. Under this ETWB TCW No.19/2005, the Contractor is required to prepare and implement an Environmental Management Plan (EMP) and the Waste Management Plan (WMP) becomes part of the EMP.</p> <p><u>Waste Reduction Measures</u></p> <ul style="list-style-type: none"> • Prior to disposal of C&D waste, wood, steel and other metals should be separated for reuse and / or recycling to minimize the quantity of waste to be disposed of to landfill • Minimize use of wood and reuse non-timber formwork to reduce the amount of C&D waste • As far as practicable, segregate and store 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, plastic bottles and packaging material (e.g. carton boxes) and office paper 	Project site / construction and demolition phase	Contractor	√	√		WBCT No. 32/1992 WBCT No. 19/2005
S.4.61- S.4.62	<p><u>Excavated Materials</u></p> <ul style="list-style-type: none"> • Rock and soil generated from excavation should be reused during site formation and landscaping as far as practicable to reduce total amount disposed off site. • Trip ticket should be implemented for surplus excavated materials 	Project site / construction and demolition phase	Contractor / ArchSD	√			WBTC No. 12/2000 ETWB TC(W) No. 31/2004
S.4.63 – S.4.66	<p><u>Construction and Demolition Materials</u></p> <ul style="list-style-type: none"> • Well-planned design and good site management can minimize over-loading and generation of waste materials such as concrete and cement grouts. Wooden frame should be replaced by metals. Plastic fencing and reusable site office structure can reduce C&D waste generation. • The Contractor should recycle as much C&D materials as possible. Proper segregation of waste types on site 	Project site / construction and demolition phase	Contractor / ArchSD	√	√		WBTC No. 2/93 The Land (Miscellaneous Provision) Ordinance WBTC No. 19/2005

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S.4.68 – S.4.70	<p>to enhance reuse and recycling of materials. Designated areas for different materials storage should be assigned for segregation.</p> <ul style="list-style-type: none"> Under the Construction Waste Disposal Charging Scheme, construction waste producers such as construction and renovation contractors and premises owners, prior using government waste disposal facilities, need to prepare a billing account with EPD and pay for construction waste disposal. It is expected that trip-ticket system should be implemented for surplus C&D materials disposal in accordance with ETWB TC(W) No.31/2004 and the Construction Waste Disposal Charging Scheme. Waste should be delivered to a public fill reception facility. Copies or counterfoils of trip tickets will be kept for record purpose. <p><u>Contaminated Materials – Further Contamination Investigation</u></p> <ul style="list-style-type: none"> Building structure of cremators, flues and chimney would likely to be contaminated by DCM ash due to long term servicing. As the cremators are still in operation, it is not possible to carry out site investigation in the areas of cremators, flues and chimney in this stage. To maintain uninterrupted cremation services, further site investigation in cremation rooms and associated equipments are proposed to undertake after decommissioning and prior to demolition of existing crematorium. According to the asbestos investigation report, asbestos gasket (woven) and insulation sheet were identified with ACM. It is also not possible to inspect all potential asbestos containing material locations due to on-going operation of cremators, concealed pipeline inside wall and covered up flange connection by metal 	<p>Cremators, chimney and flues areas/ After decommissioning but prior to demolition of the existing crematorium.</p>	<p>FEHD, ArchSD, Contractor</p>	<p>√</p>			<p>ETWB TC(W) No.31/2004</p> <p>ProPECC PN 2/97</p> <p>ProPECC PN 3/94</p> <p>APCO</p>	

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S.4.72 – S 4.73	<p>cover. Further inspection of the inaccessible locations will be undertaken prior to demolition works.</p> <ul style="list-style-type: none"> Contaminated ash and ACM potential contamination locations will be further identified. In view of close distance between the contaminated ash and ACM, there is concern on contaminated ash wastes being embedded in ACM. Therefore, it is advisable to remove contaminated ash waste prior to any asbestos containing material on building structures. <p><u>Asbestos Containing Materials</u></p> <ul style="list-style-type: none"> Asbestos waste will be handled in accordance with the Code of practice on the Handling, Transportation and Disposal of Asbestos Waste issued by the Environment and Food Bureau. Production, collection and disposal of asbestos waste will follow the “trip-ticket” system. The registered asbestos contractor will be appointed a licensed asbestos waste collector to collect the packaged asbestos waste and deliver to the designated landfill for disposal. Notification has to be given to EPD for its, Ten working days notice of the intention to dispose of asbestos waste. After processing the notification, EPD will issue specific instructions and directions for disposal. 	Cremator room in existing crematorium / before demolition	Contractor	√			COP on Handling, Transportation and Disposal of Asbestos Waste under the Waste Disposal (Chemical Waste)(General) Regulation	
S.4.75	<p><u>Demolition, Handling, Treatment and Disposal of Low Contaminated DCM from Demolition of Existing Crematorium</u></p> <ul style="list-style-type: none"> Where the ash waste contains low contamination levels of DCM (<1ppb TEQ), the Contractor should avoid ash waste becoming airborne during demolition. General dust suppression measures will be followed and ash waste would be directly disposed to landfill. 	Cremator room in existing crematorium / before demolition	Contractor	√			ProPECC PN 3/94 APCO	
S.4.76	<p><u>Demolition, Handling, Treatment and Disposal of Moderately Contaminated DCM from Demolition of Existing</u></p>	Cremator room in existing crematorium	Contractor	√			ProPECC PN 3/94	

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	<p><u>Crematorium</u></p> <ul style="list-style-type: none"> Where the ash waste contains low contamination levels of DCM (>1 and <10 ppb TEQ), the following steps should be followed: <ul style="list-style-type: none"> Site Preparation <ul style="list-style-type: none"> Except the cremators / flue / chimney, all removable items should be removed as far as practicable to avoid obstructing the decontamination activities; Preliminary site decontamination of all debris should be carried out using High Efficiency Particulate Air (HEPA) vacuum cleaner; Top portion of the chimney should be enclosed by a 3-layer chamber of polyethene sheets; At the entrance to the cremators/ flues/chimney, a 3-chamber decontamination unit should be constructed for entry and exit from the work area. The 3-chamber decontamination unit should comprise a dirty room, a shower room and a clean room of at least 1m x 1m base with 3-layer of fire retardant polyethylene sheet; Workers should carry out decontamination procedure before leaving the work area; Workers should wear full protective equipment, nitrile gloves, rubber boots and full-face positive pressure respirator; and Warning signs in both Chinese and English 	/ before demolition					APCO	

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	<p>should be provided in conspicuous areas.</p> <ul style="list-style-type: none"> • Demolition and Handling <ul style="list-style-type: none"> - The cremators / flue / chimney should be removed from top down. Any ash or residues attached to the cremators / flue / chimney or any other building structure should be removed by scrubbing and HEPA vacuuming; - Waste generated from the containment or decontamination unit including the protection clothing of the workers should be disposed to landfill; and - After removal, all surfaces should be decontaminated by HEPA vacuum. • Treatment and Disposal <ul style="list-style-type: none"> - Immobilise ash waste by proper mixing with cement as determined by the pilot mixing and Toxicity Characteristic Leaching Procedure (TCLP); - Waste material should be placed in polyethylene lined steel drums for disposal at landfill, the drums should be 16 gauge steel or thicker and fitted with double bung fixed ends adequately sealed and well labeled in new or good condition. - Drums should be clearly marked "DANGEROUS CHEMICAL WASTE" in English and Chinese. Prior agreement of the disposal criteria must be obtain from EPD and the landfill operator. 							

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S.4.77	<p>- As a fall back option, if landfill disposal criteria cannot be met after immobilization of the ash waste, disposal at the Chemical Waste Treatment Center (CWTC) should be considered.</p> <p><u>Demolition, Handling, Treatment and Disposal of Severely Contaminated DCM from Demolition of Existing Crematorium</u></p> <ul style="list-style-type: none"> Where the ash waste contains severely contamination levels of DCM (>10ppb TEQ), the following steps should be followed: <ul style="list-style-type: none"> Site Preparation <ul style="list-style-type: none"> Except the cremators / flue / chimney, all removable items should be removed as far as practicable to avoid obstructing the decontamination activities; Preliminary site decontamination of all debris should be carried out using High Efficiency Particulate Air (HEPA) vacuum cleaner; The walls, floor and ceiling of the cremator room where severely contaminated DCM should be lined with 3-layer chamber of fire retardant polyethene sheets. Top portion of the chimney above the roof should be enclosed by a 3-layer chamber of polyethene sheets; At the entrance to the cremators / flues / chimney, a 3-chamber decontamination unit should be constructed for entry and exit from the work area. The 3-chamber decontamination unit should comprise a dirty room, a shower room and a clean room of at least 1m x 1m base with 3-layer of fire 	Cremator room in existing crematorium / before demolition	Contractor	√				ProPECC PN 3/94 APCO

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	<p>retardant polyethylene sheet where all workers would carry out decontamination procedures before leaving the work area;</p> <ul style="list-style-type: none"> - Air movers should be installed at the cremator room, and at the bottom of the chimney to exhaust air from work area. A stand-by air mover should be installed with each of air movers. Sufficient air movement should be maintained to give a minimum of 6 air changes per hour to the work area; - New pre-filters and HEPA filters should be used on the air movers. - Before commencement of the decommissioning work, a smoke test with non-toxic smoke should be carried out to confirm the air tightness of the containment; - Workers should wear full protective equipment, disposable protective coverall (such as Tyvek with shoe covers and hood), nitrile gloves, rubber boots and full-face positive pressure respirator equipped with a combination cartridge that filters particulate and removes organic vapour; and - Warning signs in both Chinese and English should be provided in conspicuous areas. • Decontamination, Demolition and Handling - The cremators / flue / chimney should be removed from top down. Any ash or residues 							

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	<p>attached to the cremators / flue / chimney or any other building structure should be removed by scrubbing and HEPA vacuuming;</p> <ul style="list-style-type: none"> - The contaminated detached sections of the building structure where severely contaminated DCM is located should be wrapped with 2 layers of fire retardant polyethene sheets. A third layershould be wrapped and secured with duct tape. Decontaminate the outer layer of the wrapped flue sections by wet wiping; and - After completion of removal and decontamination, spary the innermost layer of the fire retardant polyethene sheet with PVA. Upon drying, peel off and dispose of at landfill site. <ul style="list-style-type: none"> • Treatment and Disposal <ul style="list-style-type: none"> - All contaminated ash waste with severely contaminated DCM removed and the used HEPA filters should be sent to Chemical Waste Treatment Center (CWTC) at Tsing Yi; and - Other waste including the building structures and its associated panels as well as waste generated from this decommissioning works are also considered as contaminated waste and should be disposed of at designated landfill. Waste generated from this decommissioning works refer to the polyethene wrapping sheets should be placed into appropriate containers for disposal. Permit has to be obtained from the Authority. Disposal trip ticket is required to be made available as record after disposal. 							

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S4.78	Further investigation and confirmatory test for ash waste in cremator, chimney and flues should be carried out on DCM prior to the demolition of the existing crematorium. The sampling and analysis plan should be prepared and submitted to EPD for approval.	Cremators, Chimneys and Flues / before demolition	Contractor		√		ProPECC PN 3/94 APCO
S4.79	The mitigation measures stated in Section 3.23 to 3.26 of this EM&A Manual aim to address the detailed measures of avoiding cross contamination of DCM and ACM and should form part of the DCM Assessment Report which will be submitted to EPD for approval before the commencement of the demolition of the existing crematorium.	Cremator room, cremators, chimney and flues areas/ before demolition	Contractor		√		
S.4.81 – S.4.83	<p><u>Chemical Waste</u></p> <ul style="list-style-type: none"> All the chemical waste should be handle according to the <i>Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes</i>. The chemical waste should store and collect by an licensed contractor for disposal at licensed facility in accordance with the <i>Waste Disposal (Chemical Waste)(General) Regulation</i>. Containers used for the storage of chemical waste should be: <ul style="list-style-type: none"> - Suitable for substance holding, resistant to corrosion, maintained in good condition and securely closed; - Capacity of less than 450 liters unless the specifications have been approved by the EPD; and - Display a label in English and Chinese in 	Project site / demolition	Contractor		√		Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes

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	<p>accordance with instructions prescribed in Schedule 2 of the <i>Waste Disposal (Chemical Waste)(General) Regulation</i>.</p> <ul style="list-style-type: none"> • The storage area for chemical waste should: <ul style="list-style-type: none"> - Be clearly labeled and used solely for the storage of chemical waste; - Be enclosed on at least 3 sides; - Have a impermeable floor and bunding, of capacity to accommodate 110% of the volume of the largest container or 20% by volume of the chemical waste stored in that area, whichever is the greatest; - Have adequate ventilation; - Be covered to prevent rainfall from entering (water collection within the bund must be tested and disposal as chemical waste if necessary); and - Be properly arranged so that incompatible materials are adequately separated. • The chemical waste should be disposed of by: <ul style="list-style-type: none"> - A licensed waste collector; - A facility licensed to receive chemical waste, such as CWTC at Tsing Yi, which offers chemical waste collection service and can supply the 							

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S.4.84 – S.4.85	<p>necessary storage containers; and</p> <ul style="list-style-type: none"> - A waste recycling plant as approved by EPD. <p><u>General Refuse</u></p> <ul style="list-style-type: none"> • General refuse should be stored in enclosed bins or compaction units separated from C&D and chemical wastes. Waste collector should be employed by the Contractor to minimize odour, pest and litter impacts. Open burning of refuse on construction site is prohibited by law. • The Contractor should carry out an education programme for workers in avoiding, reducing, reusing and recycling. This should include provision of three-colour recycling bins and on site and posters and leaflets advising on the use of recycling bins. 	Project site / Construction and demolition stage	Contractor		√			
S.4.86- S.4.101	<p><u>Operation Phase</u></p> <ul style="list-style-type: none"> • Ash and non-combustible residues <ul style="list-style-type: none"> -The disposal of bone and non-combustible residues should be properly collected and handled to avoid dust emissions. In line with the current practices, the bone ash will be stored in covered containers for collection by the deceased's relatives within 2 months upon appointment while the non-combustible residues will be collected in sealed heavy-duty polyethylene bags for disposal at landfill. • Chemical Waste <ul style="list-style-type: none"> - Chemical waste generated from the air pollution system as well as from machinery maintenance 	New crematorium / Operation phase	FEHD		√			Code of Practice on Packaging, Labelling and Storage of Chemical Wastes. Waste Disposal (Chemical Waste)(General) Regulation

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	<p>and servicing should be managed in accordance with the <i>Code of Practice on the Packaging, Labelling and storage of Chemical Wastes</i> under the provisions of the <i>Waste Disposal (Chemical Waste)(General) Regulation</i>. The chemical waste should be collected by drum-type containers and removed by licensed chemical waste contractor.</p> <ul style="list-style-type: none"> - Plant / equipment maintenance schedules should be planned in order to minimize the generation of chemical waste. - Non-recyclable chemical wastes and lubricants should be disposed at an appropriate facility, such as EPD Chemical Waste Treatment Centre at Tsing Yi. Copies or counterfoils from collection receipts issued by the licensed waste collector should be kept for record purpose. <ul style="list-style-type: none"> • Fly Ash <ul style="list-style-type: none"> - Collected and stored in sealed drums provided by the CWTC. - Sealed drums are stored in a designated area and are periodically collected by CWTC (normally two to three weeks interval). - Drums are taken to CWTC where they are incinerated and rendered harmless. - Residues are then disposed of at landfill. • General Refuse <ul style="list-style-type: none"> - Waste generated in offices should be reduced through segregation and collection of recyclable waste materials (such as paper). To promote recycling of waste paper, aluminum cans and 							

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S.10.5 – S.10.6	<p>plastic bottles, it is recommended to place clearly labeled recycling bins at designated locations. The recyclable waste materials should be collected by licensed collectors.</p> <p>- General refuse, other than segregated recyclable wastes, should be separated from any chemical waste and stored in covered skips. Food and Environmental Hygiene Department (FEHD) should remove general refuse from the site on daily basis to minimize odour, pest and litter impacts. Also open burning of refuse must be strictly prohibited.</p> <p>EM&A</p> <ul style="list-style-type: none"> To maintain uninterrupted cremation services, further site investigations are recommended. Building structures asbestos investigation and dioxins ash waste investigation are recommended around cremators, chimney, flues and surrounding areas. 	Cremators, chimney, flues and surrounding areas / after decommissioning and prior to demolition	Contractor		√		ProPECC PN 2/97 and 3/94 AIR,AMP/AAP to be submitted under APCO Further Site Investigation Plan

All recommendations and requirements resulted during the course of EIA Process, including ACE and / or accepted public comment to the proposed project.

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Appendix A3 Implementation Schedule for Land Contamination

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5.29	Since the cremators are still in operation the proposed trial pit location, TP-1, is possessed by CEDD, it is not possible to carry out site investigation inside the cremation rooms and at TP-1 at this stage. Further site inspection of TP-1 and two cremation rooms shall be carried out after decommissioning and prior to the demolition of the existing crematorium. A supplementary CAP shall be prepared for EPD endorsement to present detailed sampling and testing plan for two cremation rooms. Further SI of TP-1 shall be conducted in accordance with the approved CAP. Findings of site investigation and appropriate remediation methods shall be presented in supplementary CAR and RAP for EPD endorsement prior to the commencement of any earthworks. The extent of contamination, if any, should be estimated based on the depth where contaminants found, the hydrogeological condition and the contaminants levels. The actual extent would be determined by confirmatory sampling and testing.	Pipeline, Cremator Rooms 1 and 2 / before demolition of the existing cremators	Contractor				√	Guidance Note for Contaminated Land Assessment and Remediation; Guidance Notes for Investigation and Remediation of Contaminated Sites of: Petrol Filling Stations, Boatyards, and Car Repair / Dismantling Workshops; Guidance Manual for Use of Risk-Based Remediation Goals for Contaminated Land Management; and EIAO-TM
5.40	Cement solidification / stabilization technique is considered as the most practical and cost-effective method to treat the metals contaminated soil on site.	Near underground storage tank / During soil treatment	Contractor				√	
5.43 – 5.44	Confirmatory soil sampling for closure assessment should be carried out to confirm the clean-up of the contaminated soil.	Near underground storage tank / During soil treatment	Contractor				√	
5.46	Upon completion of cement solidification / stabilization, confirmation sampling and testing shall be undertaken to ensure the cleanup targets have been attained.	Near underground storage tank / During soil treatment	Contractor				√	
5.49	If contaminated soil is found underneath the pipeline and at cremator rooms from the further SI, depending on the	Pipeline, Cremator Rooms 1 and 2 /	Contractor				√	

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	contamination extent, possible remediation methods for organic contaminants could be excavation and biopiling as well as in-situ soil venting. If the volume of contaminated is found to be small and the aforesaid remediation methods is infeasible and impracticable, excavation and landfill disposal could be considered as last resort. Closure assessment in accordance with Sections 5.43 to 5.44 of EIA Report shall be carried out in order to confirm the clean-up of contaminated soil. The remediation method should be determined in the supplementary RAP according to the laboratory results and estimated quantity of contaminated soil.	before demolition of the existing cremators						
5.50	During removal of the underground storage tank, appropriate precautions should be taken to avoid contamination. All fuel tank and associated pipework should be emptied prior to any demolition work being undertaken. Any remaining sludge or sediment in the tanks or pipework should be removed and disposed of as chemical waste in accordance with the appropriate regulation for disposal of such material. After removal of the underground storage tank, confirmatory soil sample(s) underneath the tank should be collected and tested for TPH, VOCs and Pb using the same approach as mentioned in Sections 5.43 and 5.44 of EIA Report to ensure that no contamination due to fuel leakage.	Underground storage tank system / before demolition of the existing cremators	Contractor				Occupational Safety & Health Ordinance; Guidelines on Occupational Exposure	
5.57 – 5.58	The following basic health and safety measures should be implemented as far as possible: <ul style="list-style-type: none"> • Set up a list of safety measures for site workers; • Provide written information and training on safety for site workers; • Keep a log-book and plan showing the contaminated zones and clean zones; • Maintain a hygienic working environment; • Avoid dust generation; 	At contaminated and soil treatment areas/ During soil treatment	Contractor				Occupational Safety & Health Ordinance; Guidelines on Occupational Exposure	

EIA Ref #	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
	<ul style="list-style-type: none"> • Provide face and respiratory protection gear to site workers; • Provide personal protective clothing (e.g. chemical resistant jackboot, liquid tight gloves) to site workers; and • Provide first aid training and materials to site workers. <p>The Contractor for the excavation works shall take note of the following points for excavation:</p> <ul style="list-style-type: none"> • Excavation profiles must be properly designed and executed; • In case the soil to be excavated is situated beneath the groundwater table, it may be necessary to lower the groundwater table by installing well points or similar means. The discharge of groundwater, if any, should follow the requirements under the Water Pollution Control Ordinance (WPCO); • Excavation zone should be fenced off; • Quantities of soil to be excavated must be estimated; • It may be necessary to split quantities of soil according to soil type, degree and nature of contamination; • Temporary storage of soil at intermediate depot or on-site may be required. The storage site should include protection facilities for leaching into the ground e.g. a liner may be required; • Supply of suitable clean backfill material is needed after excavation; • Care must be taken of existing buildings and utilities; and • Precautions must be taken to control of ground settlement. • should be disposed of in accordance with the WPCO. 							
5.60	The following mitigation measures are recommended to be implemented during CS/S processes.	At contaminated and soil treatment areas/	Contractor				√	Occupational Safety & Health

EIA Ref #	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
	<p><u>Air Quality Impact</u></p> <ul style="list-style-type: none"> The loading, unloading, handling, transfer or storage of cement should be carried out in an enclosed system. The loading, unloading, handling, transfer or storage of other materials which may generate airborne dust emissions such as untreated soil and oversize materials sorted out from the screening plant and stabilized soil stockpiled in the designated handling area, should be carried out in such a manner to prevent or minimise dust emissions. These materials should be adequately wetted prior to and during the loading, unloading and handling operations. All practicable measures should be taken to prevent or minimize the dust emission caused by vehicle movement. <p><u>Noise Impact</u></p> <ul style="list-style-type: none"> The mixing area should be sited as far as practicable to nearby noise sensitive receivers. Simultaneous operation of mixing plants and other equipment should be avoided. Mixing process and other associated material handling activities should be properly scheduled to minimise potential cumulative noise impact on nearby noise sensitive receivers. Construction Noise Permit should be applied for the operation of powered mechanical equipment, if any, during restricted hours. 	During soil treatment					Ordinance; Guidelines on Occupational Exposure	

EIA Ref #	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
	<p><u>Water Quality Impact</u></p> <ul style="list-style-type: none"> Stockpile of untreated soil should be covered as far as practicable to prevent the contaminated material from leaching out. The leachate should be discharged following the requirements of Water Protection Control Ordinance. <p><u>Waste</u></p> <ul style="list-style-type: none"> The oversize materials such as rocks and boulders should be screened out, cleaned the soil attached and used as filling material within the site. Contaminated materials (soil or rock fragments) of size smaller than 5 cm should be collected and transferred to the mixing area for decontamination treatment. Stabilized soils should be broken into suitable size for backfilling or reuse on site. A high standard of housekeeping should be maintained within the mixing area. There should be clear and separated areas for stockpiling of untreated and treated materials. 							

All recommendations and requirements resulted during the course of EIA Process, including ACE and / or accepted public comment to the proposed project.
 * Des - Design, C - Construction, O – Operation, and Dec - Decommissioning

Appendix A4 Implementation Schedule for Visual Impact

EIA Ref #	Environmental Measures	Protection	Measures / Mitigation	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
						Des	C	O	Dec	
Table 6.4	<p><u>Construction & Demolition Phase</u> Topsoil, where identified, should be stripped and stored for re-use in the construction of the soft landscape works, where practical. Existing trees to be retained on site should be carefully protected during construction. Trees unavoidably affected by the works should be transplanted where practical. Compensatory tree planting should be provided to compensate for felled trees. Control of night-time lighting. Erection of decorative screen hoarding compatible with the surrounding setting.</p>			Work site / During Construction Phase	Contractor	√	√			EIAO-TM Annex 10, 18 ETWB TCW 2/2004 ETWB TCW 3/2006
				Work site / During Construction Phase	Contractor	√	√			
				Work site / During Construction Phase	Contractor	√	√			
				Work site / During Construction Phase	Contractor	√	√			
				Work site / During Construction Phase	Contractor	√	√			
				Work site / During Construction Phase	Contractor	√	√			
				Work site / During Construction Phase	Contractor	√	√			
Table 6.5	<p><u>Operation Phase</u> Aesthetic design of the façade/chimneys/noise barriers and associated structures to harmonize with the surrounding settings. Aesthetic design of landscaped roof. Tree and shrub planting to enhance amenity Reinstated of disturbed area.</p>			Work site / During Design Stage and Operation Phase	FEHD	√		√		EIAO-TM Annex 10, 18 ETWB TCW 2/2004 ETWB TCW 3/2006
				Work site / During Design Stage and Operation Phase	FEHD	√		√		
				Work site / During Design Stage and Operation Phase	FEHD	√		√		
				Work site / During Design Stage and Operation Phase	FEHD	√		√		

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

Appendix A5 Implementation Schedule for Noise Control

EIA Ref #	Environmental Measures	Protection	Measures	Mitigation	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines	
							Des	C	O	Dec		
S7.49	Construction Phase Use of quiet PME for excavator/loader, soil nailing drilling machine, rock dowel drilling machine, bulldozer, dump truck and crawler mounted rock drill.				Work site / During construction and demolition phase	Contractor		√			EIAO-TM, GW-TM, NCO	
S7.52	Good Site Practice: <ul style="list-style-type: none"> Only well-maintained plant should be operated on-site and plant should be serviced regularly during the construction program; Silencers or mufflers on construction equipment should be utilized and should be properly maintained during the construction program; Mobile plant, if any, should be sited as far from NSRs as possible; Machines and plant (such as trucks) that may be in intermittent use should be shut down between work periods or should be throttled down to a minimum; Plant known to emit noise strongly in one direction should, wherever possible, be orientated so that the noise is directed away from the nearby NSRs; and Material stockpiles and other structures should be effectively utilised, wherever practicable, in screening noise from on-site construction activities. 				Work site / During construction and demolition phase	Contractor		√			EIAO-TM, GW-TM, NCO	
S7.53	Operation Phase Provision of 2.5m high acoustic barriers for a total of 10 radiators. The noise barrier would be lined with sound absorbing material at the surface of the barrier facing the noise source.				Upper roof of the crematorium / During operation phase	ArchSD, FEHD	√			√		EIAO-TM, NCO

All recommendations and requirements resulted during the course of EIA Process, including ACE and / or accepted public comment to the proposed project.

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

Appendix A6 Implementation Schedule for Water Quality Control

EIA Ref #	Environmental Measures	Protection	Measures	Mitigation	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
							Des	C	O	Dec	
S8.30 to S8.52	The measures as outlined in the ProPECC PN 1/94 should be followed where applicable.				Work site / during construction and demolition phase	Contractor		√			Technical Memorandum on the Environmental Impact Assessment Process (EIAO-TM) Water Pollution Control Ordinance (WPCO) Technical Memorandum on Standards for Effluents Discharged into Drainage and Sewerage Systems, Inland and Coastal Waters (TM-DSS)
S8.3 and S8.53	There is a need to apply to EPD for a discharge licence under the WPCO for discharging effluent from the construction site. The discharge quality is required to meet the requirements specified in the discharge licence. All the runoff, wastewater or extracted groundwater generated from the works areas should be treated as necessary so that it satisfies all the standards listed in the TM-DSS. Monitoring of the construction site effluent quality should be carried out in accordance with the WPCO license which is under the ambit of regional office (RO) of EPD.				Work site / during construction and demolition phase	Contractor		√			EIAO-TM, WPCO, TM-DSS
S8.54	Temporary sanitary facilities, such as portable chemical toilets, should be employed on-site where necessary to				Work site / during construction and	Contractor		√			EIAO-TM, WPCO, TM-DSS

EIA Ref #	Environmental Measures	Protection	Measures / Mitigation	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
						Des	C	O	Dec	
	handle sewage from the workforce. A licensed contractor would be responsible for appropriate disposal of waste matter and maintenance of these facilities.			demolition phase						
S8.55	Good site practices should be adopted to remove rubbish and litter from construction sites so as to prevent the rubbish and litter from spreading from the site area. It is recommended to clean the construction sites on a regular basis. Stockpiles of cement and other construction materials should be kept covered when not being used.			Work site / during construction and demolition phase	Contractor	√				EIAO-TM, WPCO, TM-DSS
S8.56	Oils and fuels should only be used and stored in designated areas which have pollution prevention facilities. To prevent spillage of fuels and solvents to the nearby watercourse, all fuel tanks and storage areas should be provided with locks and be sited on sealed areas, within bunds of a capacity equal to 110% of the storage capacity of the largest tank. The bund should be drained of rainwater after a rain event. Oil leakage or spillage should be contained and cleaned up immediately.			Work site / during construction and demolition phase	Contractor	√				EIAO-TM, WPCO, TM-DSS
S8.57	Handling and disposal of operation stage effluent should follow the practices outlined in ProPECC PN 5/93 where applicable.			Project site / during design and operation phase	FEHD	√		√		EIAO-TM, WPCO, TM-DSS

All recommendations and requirements resulted during the course of EIA Process, including ACE and / or accepted public comment to the proposed project.

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