Appendix B Implementation Schedule of Recommended Mitigation Measures

Below table presents the implementation schedule of mitigation measures for the Project. For each recommended mitigation measures, both the location and timing for the measure have clearly been identified as well as the parties responsible for implementing the measure and for maintenance (where applicable).

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measure & Main Concerns to address	Who to implement the measure?	Location of the measure	When to implement the measure?	Requirement
Air Quality Impact							
3.8.1, 3.9.1	2.4, 2.5	Watering once every 2 hours on construction works areas to reduce dust emission.	To minimize dust impacts	Contractor	Construction sites with active works, exposed surface and unpaved road	Construction Phase	Air Pollution Control Ordinance (APCO); Air Pollution Control (Construction Dust) Regulation; HKAQO; Technical Memorandum on Environmental Impact Assessment Process (EIAO-TM)
3.9.1	2.4, 2.5	Dust suppression measures stipulated in the Air Pollution Control (Construction Dust) Regulation and good site practices listed below shall be carried out to further minimize construction dust impact: • Use of regular watering 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 area of barging point, 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. • Provision of not less than 2.4m high hoarding from ground level along site boundary where adjoins a road, streets or other accessible to the public except for a site entrance or exit. • Imposition of speed controls for vehicles on site haul roads. • Where possible, routing of vehicles and positioning of construction plant should be at the maximum possible distance from ASRs. • Instigation of an environmental monitoring and auditing program to monitor the construction process in order to enforce controls and modify method of work if dusty conditions arise.	To minimize dust impacts	Contractor	Contractor	Construction sites	Air Pollution Control Ordinance (APCO); Air Pollution Control (Construction Dust) Regulation; HKAQO; Technical Memorandum on Environmental Impact Assessment Process (EIAO-TM)
3.9.1	2.4, 2.5	Timely application of temporary electricity and water supply would be made and electric vehicles would be adopted in the Project	To minimize the exhaust emission from NRMMs	Contractor	Construction sites	Construction Phase	DEVB TC(W) No. 13/2020 – *Timely Application of Temporary Electricity and Water Supply for Public Works Contracts and Wider Use of Electric Vehicles in Public Works Contracts*
3.5.2	2.4, 2.5	Biogas generated will be stored in the biogas holders. The stored biogas will go through the sulphur absorption vessels to remove the hydrogen sulphide (H_2S) before passing to the combined heat and power (CHP) generator.	To minimize the impact from CHP	Operator	HSKEPP	Design and Operation Phase	EIAO-TM
3.5.3, 3.6.3	2.4, 2.5	All the odour sources in HSKPP should be covered and all odourous gas should be treated at the deodourizers (DOs) with 95% odour removal efficiency before venting to the atmosphere.	To minimize the odour impact	Operator	HSKEPP	Design and Operation Phase	EIAO-TM

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measure & Main Concerns to address	Who to implement the measure?	Location of the measure	When to implement the measure?	Requirement
Noise Impact							
Nil							
Water Quality Impact							
5.7.1	4.6.7	The site practices outlined in ProPECC PN 1/94 "*Construction Site Drainage*" should be followed as far as practicable to minimise surface run-off and the chance of erosion. Surface run-off from construction sites should be discharged into storm drains via adequately designed sand / silt removal facilities such as sand traps, silt traps and sedimentation basins. Channels, earth bunds or sand bag barriers should be provided on site to properly direct stormwater to such silt removal facilities. Perimeter channels at site boundaries should be provided as necessary to intercept storm run-off from outside the site so that it will not wash across the site. Catchpits and perimeter channels should be constructed in advance of site formation works and earthworks.	To minimize impact from construction site run-off and general construction activities	Contractor	Construction Sites / Construction Phase	Construction Phase	Water Pollution Control Ordinance (WPCO); EIAO-TM, Professional Persons Environmental Consultative Committee (ProPECC) Practice Note (PN) 1/94
5.7.1	4.6.7	Silt removal facilities, channels and manholes should be maintained and the deposited silt and grit should be removed regularly (as well as at the onset of and after each rainstorm) to prevent overflows and localised flooding. Before disposal at the public fill reception facilities, the deposited silt and grit should be solicited in such a way that it can be contained and delivered by dump truck instead of tanker truck. Any practical options for the diversion and realignment of drainage should comply with both engineering and environmental requirements in order to provide adequate hydraulic capacity of all drains.	To minimize impact from construction site run-off and general construction activities	Contractor	Construction Sites / Construction Phase	Construction Phase	WPCO; EIAO-TM, ProPECC PN 1/94
5.7.1	4.6.7	Construction works should be programmed to minimise soil excavation in the wet season (i.e. April to September). If soil excavation cannot be avoided in these months or at any time of year when rainstorms are likely, temporarily exposed slope surfaces should be covered e.g. by tarpaulin, and temporary access roads should be protected by crushed stone or gravel, as excavation proceeds. Intercepting channels should be provided (e.g. along the crest / edge of excavation) to prevent storm run-off from washing across exposed soil surfaces. Arrangements should always be in place in such a way that adequate surface protection measures can be safely carried out well before the arrival of rainstorm.	To minimize impact from construction site run-off and general construction activities	Contractor	Construction Sites / Construction Phase	Construction Phase	WPCO; EIAO-TM, ProPECC PN 1/94
5.7.1	4.6.7	Earthworks final surfaces should be well compacted and the subsequent permanent work or surface protection should be carried out immediately after the final surfaces are formed to prevent erosion caused by rainstorms. Appropriate drainage like intercepting channels should be provided where necessary.	To minimize impact from construction site run-off and general construction activities	Contractor	Construction Sites / Construction Phase	Construction Phase	WPCO; EIAO-TM; ProPECC PN 1/94
5.7.1	4.6.7	Measures should be taken to minimise the ingress of rainwater into trenches. If excavation of trenches in the wet season is necessary, they should be dug and backfilled in short sections. Rainwater pumped out from trenches or foundation excavations should be discharged into storm drains via silt removal facilities	To minimize impact from construction site run-off and general construction activities	Contractor	Construction Sites / Construction Phase	Construction Phase	WPCO; EIAO-TM; ProPECC PN 1/94
5.7.1	4.6.7	Construction materials (e.g. aggregates, sand and fill material) on sites should be covered with tarpaulin or similar fabric during rainstorms.	To minimize impact from construction site run-off and general construction activities	Contractor	Construction Sites / Construction Phase	Construction Phase	WPCO; EIAO-TM; ProPECC PN 1/94
5.7.1	4.6.7	Manholes (including newly constructed ones) should always be adequately covered and temporarily sealed so as to prevent silt, construction materials or debris from getting into the drainage system, and to prevent storm run-off from getting into foul sewers. Discharge of surface run-off into foul sewers must always be prevented in order not to unduly overload the foul sewerage system.	To minimize impact from construction site run-off and general construction activities	Contractor	Construction Sites / Construction Phase	Construction Phase	WPCO; EIAO-TM; ProPECC PN 1/94
5.7.1	4.6.7	Water used in ground boring and drilling for site investigation or rock / soil anchoring should as far as practicable be re-circulated after sedimentation. When there is a need for final disposal, the wastewater should be discharged into storm drains via silt removal facilities	To minimize impact from construction site run-off and	Contractor	Construction Sites / Construction Phase	Construction Phase	WPCO; EIAO-TM; ProPECC PN 1/94

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measure & Main Concerns to address	Who to implement the measure?	Location of the measure	When to implement the measure?	Requirement
			general construction activities				
5.7.1	4.6.7	All vehicles and plants should be cleaned before they leave a construction site to minimise the deposition of earth, mud and debris on roads. A wheel washing bay should be provided at every site exit if practicable and washwater should have sand and silt settled out or removed before discharging into storm drains. The section of construction road between the wheel washing bay and the public road should be paved with backfill to reduce vehicle tracking of soil and to prevent site run-off from entering public road drains.	To minimize impact from construction site run-off and general construction activities	Contractor	Construction Sites / Construction Phase	Construction Phase	WPCO; EIAO-TM; ProPECC PN 1/94
5.7.1	4.6.7	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.	To minimize impact from construction site	Contractor	Construction Sites / Construction Phase	Construction Phase	WPCO; EIAO-TM, Waste Disposal Ordinance (WDO)
5.7.1	4.6.7	There is a need to apply to EPD for a discharge licence for discharge of effluent from the construction site under the WPCO. The discharge quality must meet the requirements specified in the discharge licence. All the runoff and wastewater generated from the works areas should be treated so that it satisfies all the standards listed in the TM-DSS. The beneficial uses of the treated effluent for other on-site activities such as dust suppression, wheel washing and general cleaning etc., can minimise water consumption and reduce the effluent discharge volume. If monitoring of the treated effluent quality from the works areas is required during the construction phase of the Project, the monitoring should be carried out in accordance with the relevant WPCO licence.	To minimize impact from construction site	Contractor	Construction Sites / Construction Phase	Construction Phase	WPCO; EIAO-TM; Technical Memorandum for Effluents Discharged into Drainage and Sewerage Systems, Inland and Coastal Waters (TM-DSS)
5.7.1	4.6.7	The practices outlined in ETWB TC (Works) No. 5/2005 "*Protection of natural streams / rivers from adverse impacts arising from construction works*" should also be adopted where applicable to minimise the water quality impacts on natural streams or surface water systems.	To minimize impact from construction site	Contractor	Construction Sites / Construction Phase	Construction Phase	WPCO; EIAO-TM, ETWB TC (Works) No. 5/2005
5.7.1	4.6.7	Contractor must register as a chemical waste producer if chemical wastes would be produced from the construction activities. The Waste Disposal Ordinance (Cap 354) and its subsidiary regulations in particular the Waste Disposal (Chemical Waste) (General) Regulation should be observed and complied with for control of chemical wastes.	To minimize impact from accidental spillage	Contractor	Construction Sites / Construction Phase	Construction Phase	WPCO; EIAO-TM, WDO
5.7.1	4.6.7	Any service shop and maintenance facilities should be located on hard standings within a bunded area, and sumps and oil interceptors should be provided. Maintenance of vehicles and equipment involving activities with potential leakage and spillage should only be undertaken within the areas appropriately equipped to control these discharges.	To minimize impact from accidental spillage	Contractor	Construction Sites / Construction Phase	Construction Phase	WPCO; EIAO-TM
5.7.1	4.6.7	Disposal of chemical wastes should be carried out in compliance with the WDO. The "*Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes*" published under the Waste Disposal Ordinance should be followed to avoid leakage or spillage of chemicals.	To minimize impact from accidental spillage	Contractor	Construction Sites / Construction Phase	Construction Phase	WPCO; EIAO-TM, WDO
5.7.1	4.6.7	Sufficient chemical toilets should be provided in the works area, with a licensed waste collector employed to clean the chemical toilets on a regular basis.	To minimise impact from workforces sewage effluent	Contractor	Construction Sites / Construction Phase	Construction Phase	WPCO; EIAO-TM
5.7.1	4.6.7	Notices should be posted at conspicuous locations to remind the workers not to discharge any sewage or wastewater into the surrounding environment.	To minimise impact from workforces sewage effluent	Contractor	Construction Sites / Construction Phase	Construction Phase	WPCO; EIAO-TM
5.7.2	-	Relevant government departments including EPD, WSD and AFCD as well as key stakeholders for mariculture and fisheries in the Deep Bay WCZ should be informed of the NWNT Tunnel maintenance event prior to any HSKEPP and San Wai STW maintenance discharge.	To minimize impact due to the maintenance discharge	Project Proponent	Project site / Design and Operation Phase	Design and Operation Phases	WPCO
5.7.2	-	NWNT Tunnel maintenance period should be shortened as far as possible and should be conducted during dry season (i.e. November to March).	To minimize impact due to the maintenance discharge	Project Proponent	Project site / Design and Operation Phase	Design and Operation Phases	WPCO

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measure & Main Concerns to address	Who to implement the measure?	Location of the measure	When to implement the measure?	Requirement
5.7.2	-	Given the sensitivity of inner Deep Bay in term of water quality and ecology, extensive effort will be expedited to avoid the occurrence for emergency discharge. In order to achieve this, the design of HSKEPP will be cautiously reviewed to include additional provisions including as follows: • Applied peaking factors for all major treatment units and electrical and mechanical equipment to avoid equipment failure; • Standby unit for all major equipment would be provided in case of unexpected breakdown of pumping and treatment facilities such that the standby pumps and treatment facilities could take over and function to replace the broken pumps; and Back-up power for dual power supply would be provided in case of power failure to sustain the function of pumping and treatment facilities.	To minimize impact due to emergency discharge	Project Proponent	Project site / Design and Operation Phase	Design and Operation Phases	WPCO
5.7.2	-	To provide a mechanism to minimise the impact of emergency discharges and facilitate subsequent management of any emergency, an Emergency Response Plan will be formulated prior to commissioning of HSKEPP to set out the emergency response procedures and actions to be followed in case of equipment or sewage treatment failure. The plant operators of HSKEPP should carry out necessary follow-up actions according to the procedures of the contingency plan to minimise any impacts on the identified WSRs due to emergency bypass. Regular maintenances and inspections to all treatment units, penstocks and plant facilities are necessary to maintain a good operation condition. A follow-up water quality monitoring exercise shall be conducted after each emergency discharge event to monitor the recovery of water quality in the vicinity.	To minimize impact due to emergency discharge	Project Proponent	Project site / Design and Operation Phase	Design and Operation Phases	WPCO
5.7.2	-	Best Management Practices (BMPs) to reduce storm water and non-point source pollution are also proposed as follows: <u>Design Measures</u> • Exposed surface shall be avoided within the the proposed development to minimise soil erosion. The site shall be either hard paved or covered by landscaping area and plantation where appropriate. • Green areas / tree / shrub planting etc. should be introduced within the site as far as possible including open space and along roadside amenity strips, which can help to reduce soil erosion. • The drainage system will be designed to avoid any case of flooding based on the 1 in 50 year return period • The existing watercourses in adjacent to the Project site will be retained to maintain the original flow path <u>Devices/ Facilities to Control Pollution</u> • Screening facilities such as standard gully grating and trash grille, with spacing which is capable of screening off large substances such as fallen leaves and rubbish should be provided at the inlet of drainage system. • Road gullies with standard design and silt traps and oil interceptors should be incorporated during the detailed design to remove particles present in storm water runoff. <u>Administrative Measures</u> • Good management measures such as regular cleaning and sweeping of road surface / open areas is suggested. The road surface / open area cleaning should also be carried out prior to occurrence of rainstorm. Manholes, as well as storm water gullies, ditches provided at the Project site should be regularly inspected and cleaned (e.g. monthly). Additional inspection and cleansing should be carried out before forecast heavy rainfall.	To minimize impact due to stormwater discharge	Project Proponent	Project site / Design and Operation Phase	Design and Operation Phases	WPCO; ProPECC PN 5/93
5.7.2	-	Chemical should be stored on site at bunded area and separate drainage system as appropriate should be provided to avoid any spilled chemicals from entering the storm drain in case of accidental spillage. Also, adequate tools for cleanup of spilled chemicals should be stored on site and appropriate training shall be provided to staffs to further prevent potential adverse water quality impacts from happening.	To minimize impact due to chemical spillage	Project Proponent	Project site / Design and Operation Phase	Design and Operation Phases	WPCO

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measure & Main Concerns to address	Who to implement the measure?	Location of the measure	When to implement the measure?	Requirement
Waste Management Implication							
6.6.1	5.2.1	<u>Good Site Practices</u> Recommendations for good site practices during the construction phase include: • Nomination of an approved personnel, such as a site manager, to be responsible for good site practices, and making arrangements for collection of all wastes generated at the site and effective disposal to an appropriate facility; • Training of site personnel in proper waste management and chemical waste handling procedures; • Provision of sufficient waste reception/ disposal points, of a suitable vermin-proof design that minimises windblown litter; • Arrangement for regular collection of waste for transport off-site and final disposal; • Appropriate measures to minimise windblown litter and dust during transportation of waste by either covering trucks or by transporting wastes in enclosed containers; • Regular cleaning and maintenance programme for drainage systems, sumps and oil interceptors; • A recording system for the amount of wastes generated, recycled and disposed (including the disposal sites) should be proposed; and Preparation of a WMP in accordance with ETWB TCW No. 19/2005 and submit to the Engineer for approval.	To avoid and minimize impacts arising from waste management	Contractor	Construction Sites	Construction Phase	Waste Disposal Ordinance (WDO)
6.6.1	5.2.1	<u>Waste Reduction Measures</u> Recommendations to achieve waste reduction include: • Segregate and store different types of construction related waste in different containers, skips or stockpiles to enhance reuse or recycling of materials and their proper disposal; • Provide separate labelled bins to segregate recyclable waste such as aluminium cans from other general refuse generated by the work force, and to encourage collection by individual collectors; • Any unused chemicals or those with remaining functional capacity shall be recycled; • Maximising the use of reusable steel formwork to reduce the amount of C&D materials; • Prior to disposal of C&D waste, it is recommended that wood, steel and other metals shall be separated for re-use and/or recycling to minimise the quantity of waste to be disposed of at landfill; • Adopt proper storage and site practices to minimise the potential for damage to, or contamination of, construction materials; • Plan the delivery and stock of construction materials carefully to minimize the amount of surplus waste generated; • Adopt pre-cast construction method instead of cast-in-situ method for construction of concrete structures as much as possible; • Minimise over ordering of concrete, mortars and cement grout by doing careful check before ordering; and Provide training to workers on the importance of appropriate waste management procedures, including waste reduction, reuse and recycling.	To minimize waste generation	Contractor	Construction Sites	Construction Phase	WDO
6.6.1	5.2.1	<u>Storage of Waste</u> Recommendations to minimise the impacts include: • Waste, such as soil, should be handled and stored well to ensure secure containment, thus minimizing the potential of pollution; • Maintain and clean storage areas routinely;	To avoid and minimize impacts arising from waste management	Contractor	Construction Sites	Construction Phase	-

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measure & Main Concerns to address	Who to implement the measure?	Location of the measure	When to implement the measure?	Requirement
		• Stockpiling area should be provided with covers and water spraying system to prevent materials from wind-blown or being washed away; and Different locations should be designated to stockpile each material to enhance reuse.					
6.6.1	5.2.1	<u>Collection of Waste</u> Licensed waste haulers should be employed for the collection and transportation of waste generated. The following measures should be enforced to minimise the potential adverse impacts: • Remove waste in a timely manner; • Waste collectors should only collect wastes prescribed by their permits; • Impacts during transportation, such as dust and odour, should be mitigated by the use of covered trucks or in enclosed containers; • Obtain relevant waste disposal permits from the appropriate authorities; • Dispose of waste at licensed waste disposal facilities; and • Maintain records of quantities of waste generated, recycled and disposed.	To avoid and minimize impacts arising from waste management	Contractor	Construction Sites	Construction Phase	WDO; Waste Disposal (Charges for Disposal of Construction Waste) Regulation; Land (Miscellaneous Provisions) Ordinance
6.6.1	5.2.1	<u>Transportation of Waste</u> In order to monitor the disposal of C&D materials at PFRFs and landfills and to control fly-tipping, a trip-ticket system should be established in accordance with DEVB TCW No. 6/2010. A recording system for the amount of waste generated, recycled and disposed, including the disposal sites, should also be set up. Warning signs should be put up to remind the designated disposal sites. CCTV should be installed at the vehicular entrance and exit of the site as additional measures to prevent fly-tipping.	To avoid and minimize impacts arising from waste management	Contractor	Transportation Route of Waste / Construction Phase	Construction Phase	DEVB TC(W) No. 6/2010
6.6.1	5.2.1	<u>Construction and Demolition Material</u> Careful design, planning together with good site management can reduce over-ordering and generation of C&D materials such as concrete, mortar and cement grouts. Formwork should be designed to maximize the use of standard wooden panels, so that high reuse levels can be achieved. Alternatives such as steel formwork or plastic facing should be considered to increase the potential for reuse.	To avoid and minimize impacts arising from waste management	Contractor	Construction Sites	Design and Construction Phase	-
6.6.1	5.2.1	The excavated material arising from site formation and foundation works should be reused on-site as backfilling material and for landscaping works as far as practicable. Other mitigation requirements are listed below: • A WMP, which becomes part of the EMP, should be prepared in accordance *with ETWB TCW No.19/2005*; • A recording system for the amount of wastes generated, recycled and disposed (including the disposal sites) should be adopted for easy tracking; and In order to monitor the disposal of C&D materials at public filling facilities and landfills and to control fly-tipping, a trip-ticket system should be adopted (refer to *DEVB TCW 06/2010*).	To avoid and minimize impacts arising from waste management	Contractor	Construction Sites	Construction Phase	WDO; ETWB TCW No.19/2005; ETWB TCW No. 6/2010
6.6.1	5.2.1	It is recommended that specific areas should be provided by the Contractors for sorting and to provide temporary storage areas (if required) for the sorted materials. Control measures for temporary stockpiles on-site should be taken in order to minimize the noise, generation of dust and pollution of water. These measures include: • Surface of stockpiled soil should be regularly wetted with water especially during dry season; • Disturbance of stockpile soil should be minimised; • Stockpiled soil should be properly covered with tarpaulin especially when heavy storms are predicted; and Stockpiling areas should be enclosed where space is available.	To avoid and minimize impacts arising from waste management	Contractor	Construction Sites	Construction Phase	ETWB TCW No.19/2005

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measure & Main Concerns to address	Who to implement the measure?	Location of the measure	When to implement the measure?	Requirement
6.6.1	5.2.1	The Contactor should prepare and implement an EMP in accordance with ETWB TCW No. 19/2005, which describes the arrangements for avoidance, reuse, recovery, recycling, storage, collection, treatment and disposal of different categories of waste to be generated from construction activities. Such a management plan should incorporate site-specific factors, such as the designation of areas for segregation and temporary storage of reusable and recyclable materials. The EMP should be submitted to the Engineer for approval. The Contractor should implement waste management practices in the EMP throughout the construction stage of the Project. The EMP should be reviewed regularly and updated by the Contractor, preferably on a monthly basis.	To avoid and minimize impacts arising from waste management	Contractor	Construction Sites	Construction Phase	ETWB TCW No.19/2005
6.6.1	5.2.1	The Contractor would be responsible for devising a system to work for on-site sorting of C&D materials and promptly removing all sorted and process materials arising from the construction activities to minimise temporary stockpiling on-site. The system should be included in the EMP identifying the source of generation, estimated quantity, arrangement for on-site sorting, collection, temporary storage areas and frequency of collection by recycling Contractors or frequency of removal off-site.	To avoid and minimize impacts arising from waste management	Contractor	Construction Sites	Construction Phase	-
6.6.1	5.2.1, 5.2.2	Suitable containers compatible with the chemical wastes should be used, and incompatible chemicals should be stored separately. Appropriate labels should be securely attached on each chemical waste container indicating the corresponding chemical characteristics of the chemical waste, such as explosive, flammable, oxidizing, irritant, toxic, harmful, corrosive, etc. The Contractor shall employ a licensed collector to transport and dispose of the chemical wastes, to the licensed CWTC, or other licensed facilities, in accordance with the Waste Disposal (Chemical Waste) (General) Regulation	To avoid and minimize impacts arising from waste management	Contractor / Operator	Construction Sites	Construction and Operation Phases	ETWB TC(W) 19/2005; TC(W) 6/2010; WDO; Waste Disposal (Chemical Waste) (General) Regulation; Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes
6.6.1	5.2.1, 5.2.2	It is recommended to place clearly labelled recycling bins at designated locations with convenient access. Other general refuse should be separated from chemical and industrial waste by providing separated bins or skips for storage to maximise the recyclable volume. A reputable licensed waste collector should be employed to remove general refuse on a daily basis to minimise odour, pest and litter impacts.	To avoid and minimize impacts arising from waste management	Contractor / Operator	Construction Sites	Construction and Operation Phases	Public Health and Municipal Services Ordinance (Cap.132)
6.6.2	5.2.2	The below good housekeeping practices for the proposed HSKEPP should be followed to further ameliorate any odour impact from handling, collection, transportation and disposal of screenings, grits and sludge: • Screens should be cleaned regularly to remove any accumulated organic debris; • Screening and grit transfer systems should be flushed regularly with water to remove organic debris and grit; • Grit and screened materials should be transferred to closed containers; • Scum and grease collection wells and troughs should be emptied and flushed regularly to prevent putrefaction of accumulated organics; • Skim and remove floating solids and grease from primary clarifiers regularly; • Frequent sludge withdrawal from tanks is necessary to prevent the production of gases; • Organic waste should be transported to HSKEPP by fully enclosed trucks or dedicated pipes to avoid odour nuisance; • Organic waste should be stored in closed containers at the reception area; • During the unavailability of digesters (e.g. maintenance or co-digestion period), the diluted organic waste should remain inside the Diluted Food Waste Preparation Tank under continuously mixed condition; • Sludge should be transported to the STF by water-tight containers to avoid H_2S/odour emission and ingress of water into the containers which would lower the sludge dryness during transportation; • Sludge cake should be transferred to closed containers; • Sludge containers should be flushed with water regularly; and Sludge trucks and containers should be washed thoroughly before leaving the HSKEPP to avoid any odour nuisance during transportation.	To avoid and minimize impacts arising from waste management	Operator	Proposed HSKEPP site	Operation Phase	WDO

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measure & Main Concerns to address	Who to implement the measure?	Location of the measure	When to implement the measure?	Requirement
6.6.2	5.2.2	The screenings and grits would be collected and disposed of at landfill regularly by a reputable waste collector while the dewatered sludge would be disposed of at STF in Tuen Mun to reduce the potential pest, odour and litter impacts. In addition, all wastewater generated from the sludge dewatering process and all contaminated water from the cleaning operations recommended for odour control will be diverted to the proposed HSKEPP for proper treatment.	To avoid and minimize impacts arising from waste management	Operator	Proposed HSKEPP site	Operation Phase	WDO
Land Contamination							
7.8.1	6.1	Site re-appraisal should be conducted for the identified concerned areas prior to development of the sites in order to update findings of the site appraisal (e.g. change in land use and additional hotspots) and the sampling and testing requirements for SI works. In addition, re-appraisal would be required for the other remaining areas of the proposed HSKEPP site to assess the latest land uses and site conditions. Supplementary CAP(s), incorporating findings of the site re-appraisal for the entire proposed HSKEPP site and the updated sampling and testing strategy, should be prepared and submitted to EPD for approval prior to conducting any SI works. SI works should then be carried out according to the EPD approved supplementary CAP(s). After completion of the SI works, CAR(s) would be prepared to present findings of the SI works. If contamination has been identified, RAP(s) would be prepared to recommend specific remediation measures. Upon completion of the remediation works, if any, RR(s) would also be prepared to demonstrate that the clean-up works are adequate. The CAR, RAP and RR would be submitted to EPD for approval prior to commencement of any construction / development works.	To control land remediation work	Project Proponent / Consultant / Contractor under HSK/HT NDA project	Proposed HSKEPP site / Prior to construction / development works	Design and Construction Phases	Guidance Note for Contaminated Land Assessment and Remediation; Practice Guide for Investigation and Remediation of Contaminated Land; Guidance Manual for Use of Risk-based Remediation Goals for Contaminated Land Management
7.8.3	6.2	The mitigation measures will be recommended in the RAP and would typically include the following: • Excavation profiles must be properly designed and executed with attention to the relevant requirements for environment, health and safety; • Excavation shall be carried out during dry season as far as possible to minimise contaminated runoff from contaminated soils; • Supply of suitable clean backfill material (or treated soil) after excavation; • Stockpiling site(s) shall be lined with impermeable sheeting and bunded. Stockpiles shall be fully covered by impermeable sheeting to reduce dust emission. If this is not practicable due to frequent usage, regular watering shall be applied. However, watering shall be avoided on stockpiles of contaminated soil to minimise contaminated runoff. • Vehicles containing any excavated materials shall be suitably covered to limit potential dust emissions or contaminated wastewater run-off, and truck bodies and tailgates shall be sealed to prevent any discharge during transport or during wet conditions; • Speed control for the trucks carrying contaminated materials shall be enforced; • Vehicle wheel and body washing facilities at the site's exist points shall be established and used; and Pollution control measures for air emissions (e.g. from biopile blower and handling of cement), noise emissions (e.g. from blower or earthmoving equipment), and water discharges (e.g. runoff control from treatment facility) shall be implemented and complied with relevant regulations and guidelines.	To control land remediation work	Contractor under the HSK/HT NDA project	Proposed HSKEPP site / During remediation works and prior to construction / development works	Construction Phase	Guidance Note for Contaminated Land Assessment and Remediation; Practice Guide for Investigation and Remediation of Contaminated Land; Guidance Manual for Use of Risk-based Remediation Goals for Contaminated Land Management
Ecological Impact (Terrestrial and Aquatic)							
Nil							
Landscape and Visual Impact							
Table 9.11	8.2	<u>Preservation of Existing Vegetation</u> All the existing vegetation and trees to be retained and not to be affected by the Project shall be carefully protected during construction accordance with DEVB TC(W) No. 4/2020 - Tree Preservation and the latest Guidelines on Tree Preservation during Development	To preserve existing vegetation.	Project Proponent/ Contractor	Construction Sites	Design and Construction Phases	DEVB TC(W) No. 4/2020 - Tree Preservation and the latest Guidelines on Tree Preservation during Development issued by GLTMS of DEVB, Guidelines for Tree Risk

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measure & Main Concerns to address	Who to implement the measure?	Location of the measure	When to implement the measure?	Requirement
		issued by GLTMS of DEVB. Any existing vegetation in landscaped areas and natural terrain not to be affected by the Project shall be carefully preserved.					Assessment and Management Arrangement issued by DEVB
Table 9.11	8.2	Minimize Disturbance on Watercourses The design shall minimize disturbance on watercourses, particularly for natural watercourse. Good site practices as described in ETWB TCW No. 5/2005 "Protection of natural streams/rivers from adverse impacts arising from construction works" shall also be adopted to avoid any pollution entering the watercourses nearby where applicable. Should temporarily or indirect disturbance on watercourse is unavoidable, it shall be reinstated to the satisfaction of relevant Government Departments.	To minimize the disturbance to watercourses as far as practicable.	Project Proponent/ Contractor	Construction Sites	Design and Construction phase	ETWB TCW No. 5/2005 "Protection of natural streams/rivers from adverse impacts arising from construction works"
Table 9.11	8.2	Management of Construction Activities and Facilities The facilities and activities at works sites and areas, which include site office, temporary storage areas, temporary works etc., shall be carefully managed and controlled on the height, deposition and arrangement to minimise any potential adverse landscape and visual impacts.	To minimise any potential adverse landscape and visual impacts.	Contractor	Construction Sites	Construction phase	-
Table 9.11	8.2	Reinstatement of Temporarily Disturbed Landscape Areas All hard and soft landscape areas disturbed temporarily during construction due to temporary excavations, temporary works sites and works areas shall be reinstated to equal or better quality, to the satisfaction of the relevant Government Departments.	To reinstate to equal or better quality of temporarily disturbed landscape areas.	Contractor	Construction Sites	Construction phase	-
Table 9.11	8.2	Control of Night-time Lighting Glare Any lighting provision of the construction works at night shall be carefully control to prevent light overspill to the nearby VSRs and into the sky. Relevant best practices as suggested in the "Guidelines on Industry Best Practices for External Lighting Installations" promulgated by ENB shall be adopted.	To prevent light overspill to the nearby VSRs and into the sky.	Contractor	Construction Sites	Construction phase	"Guidelines on Industry Best Practices for External Lighting Installations" promulgated by ENB
Table 9.11	8.2	Erection of Decorative Screen Hoarding Decorative Hoarding, which is compatible with the surrounding natural settings, shall be erected during construction to minimise the potential landscape and visual impacts due to the construction works and activities.	To minimise the potential landscape and visual impacts due to the construction works and activities.	Contractor	Construction Sites	Construction phase	-
Table 9.12	8.2	Compensatory Tree Planting for Loss of Existing Trees Any trees to be removed under the Project shall be compensated in accordance with DEVB TC(W) No. 4/2020 - Tree Preservation. The compensatory plantings shall be realistic, practicable and sustainable with a holistic consideration to balance the quantity and quality of tree planting and follow the "right tree for the right place" principles. The proposed planting species shall be made reference to the Greening Master Plan issued by CEDD and the Street Tree Selection Guide issued by DEVB. Approximately 250 heavy standard trees are proposed within site under OM1, the exact number and location subject to the detailed design at design and construction stage of this Project.	To enhance ecological value and improve overall value of landscape setting.	Project Proponent/ Contractor	Construction Sites	Design / Construction and Operation Phases	DEVB TC(W) No. 4/2020 - Tree Preservation, GEO Publication No. 1/2011, the Greening Master Plan issued by CEDD, the Street Tree Selection Guide issued by DEVB and DEVB TC(W) No. 6/2015 - Maintenance of Vegetation and Hard Landscape Features
Table 9.12	8.2	Roadside and Amenity Planting Roadside amenity trees and understory planting to be planted along EVA and access road within HSKEPP, as green buffers for the new proposed structures. The proposed planting species shall be made reference to the Greening Master Plan issued by CEDD and the Street Tree Selection Guide issued by DEVB.	To maximize the greening effect by shade-tolerant tree or shrub species.	Project Proponent/ Contractor	Construction Sites	Design / Construction and Operation Phases	DEVB TC(W) No. 4/2020 - Tree Preservation, GEO Publication No. 1/2011, the Greening Master Plan issued by CEDD, the Street Tree Selection Guide issued by DEVB and DEVB TC(W) No. 6/2015 -

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measure & Main Concerns to address	Who to implement the measure?	Location of the measure	When to implement the measure?	Requirement
							Maintenance of Vegetation and Hard Landscape Features
Table 9.12	8.2	<u>Sensitive and Aesthetically Pleasing Design of Aboveground Structures</u> Sensitive and aesthetically pleasing design as regard to the form, material and finishes shall be incorporated to the proposed above-ground structures e.g. effluent polishing plant, etc. so as to minimise any potential adverse landscape and visual impacts, and to blend in the structures to the adjacent landscape and visual context.	To minimise any potential adverse landscape and visual impact.	Project Proponent/ Contractor	Construction Sites	Design / Construction and Operation Phases	-
Table 9.12	8.2	<u>Provision of Buffer Planting</u> Buffer Planting shall be provided at the perimeter of the plant to screen and soften the proposed Aboveground Structures. For planting to be proposed on slopes, the guidelines for planting stipulated in GEO Publication No. 1/2011 will be followed.	To maximize the greening effect by shade-tolerant tree or shrub species. And soften the hard structural elements.	Project Proponent/ Contractor	Construction Sites	Design / Construction and Operation Phases	GEO Publication No. 1/2011, the Greening Master Plan issued by CEDD, the Street Tree Selection Guide issued by DEVB and DEVB TC(W) No. 6/2015 - Maintenance of Vegetation and Hard Landscape Features
Table 9.12	8.2	<u>Provision of Green Roof</u> Green Roof shall be proposed to enhance the landscape quality of the Aboveground Structures including Primary Sedimentation Tanks and mitigate any potential adverse visual impact on adjacent VSRs. The extent of roof greening shall be in accordance with DEVB TC(W) No. 3/2012 – Site Coverage of Greenery for Government Building Projects	To maximize the greening effect by roof top greening	Project Proponent/ Contractor	Construction Sites	Design / Construction and Operation Phases	DEVB TC(W) No. 3/2012 – Site Coverage of Greenery for Government Building Projects
Table 9.12	8.2	<u>Control of Night-time Lighting Glare</u> All the night time lighting shall be avoided except for safety purpose. No light glare shall illuminate directly outside HSKEPP. Relevant best practices as suggested in the "Guidelines on Industry Best Practices for External Lighting Installations" promulgated by ENB shall be adopted.	To prevent light overspill to the nearby VSRs and into the sky.	Project Proponent/ Contractor	Construction Sites	Design / Construction and Operation Phases	"Guidelines on Industry Best Practices for External Lighting Installations" promulgated by ENB
Hazard to Life							
10.9.1	9.2	• Process plant building should be provided with adequate number of gas detectors distributed over various areas of potential leak sources to provide adequate coverage. • All electrical equipment inside the building should be classified in accordance with the electrical area classification requirements. No unclassified electrical equipment should be used during operations or maintenance. • All safety valves should be designed to discharge the released fluid to a safe location and stop misdirection of fluid flows in order to avoid hazardous outcome. • Safety markings and crash barriers should be provided to the aboveground piping, digesters and gas holders near the entrance. • Fixed crash barriers should be provided in areas where process equipment is adjacent to the internal roadway to protect against vehicle collision. Adequate warning signage and lighting should also be provided and maximum speed limit should also be in place. • Lightning protection installations should be installed following IEC 62305, BS EN 62305, AS/NZS 1768, NFPA 780 or equivalent standards. • Suitable fire extinguishers should be provided within the site. Suitable firefighting and fire service installations should be installed in appropriate areas, such as around the gasholders, digester and sulphur removal vessels. The facilities should also be equipped with fire and gas detection system and fire suppression system. • Stringent procedures should be implemented to prohibit smoking or naked flames to be used on-site.	To limit the number of causalities and/ or fatalities.	Project Proponent, Operators	Propose HSKEPP Site	Design and Operation Phases	-