APPENDIX B IMPLEMENTATION SCHEDULE OF THE PROPOSED MITIGATION MEASURES

Table B-1 Implementation Schedule of the Proposed Mitigation Measures for Air Quality Impact

EIA Ref.	Environmental Protection Measures	Location / Duration of measures/ Timing of completion of measures	Implementation Agent	Implementation Stages**			Relevant Legislation and Guidelines
				Des	C	O	
Construction Phase							
3.7.1.1	Sufficient dust suppression measures as stipulated under the *Air Pollution Control (Construction Dust) Regulation* (Cap. 311R), as well as good site practices and good housekeeping of the site should be properly implemented in order to minimise the construction dust generated. These measures include the followings: a) Use of regular watering, to reduce dust emissions from exposed site surfaces and unpaved roads particularly during dry weather; b) Use of frequent watering of particular dusty construction areas close to ASRs; c) Use of frequent watering or water sprinklers for major haul roads, material stockpiling areas and other dusty activities within the construction site; d) 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 should be applied to aggregate fines; e) Provide hoarding of not less than 2.4 m high from ground level along the site boundary except for site entrance or exit; f) Open temporary stockpiles should be avoided or covered. Prevent placing dusty material storage plies near ASRs;	All construction sites / construction phase / upon completion of all construction activities	Contractor		✓		- Air Pollution Control Ordinance (APCO); - Hong Kong Air Quality Objectives (HKAQO); - Air Pollution Control (Construction Dust) Regulation; and - Technical Memorandum on Environmental Impact Assessment Process (EIAO-TM)

** Des – Design, C – Construction, and O – Operation

EIA Ref.	Environmental Protection Measures	Location / Duration of measures/ Timing of completion of measures	Implementation Agent	Implementation Stages**			Relevant Legislation and Guidelines
				Des	C	O	
	g) Tarpaulin covering of all dusty vehicle loads transported to, from and between site locations; h) Establishment and use of vehicle wheel and body washing facilities at the exit point of the site; i) Imposition of speed control for vehicles on unpaved site roads. 8 km/hr is the recommended limit; and j) Routing of vehicles and positioning of construction plant should be at the maximum possible distance from ASRs; k) Avoid position of material stockpiling areas, major haul roads and dusty works within the construction site close to concerned ASRs; and l) Avoid unnecessary exposed earth.						
3.7.1.2	Guidelines stipulated in EPD's *Recommended Pollution Control Clauses for Construction Contracts* should be incorporated in the contract documents to abate dust impacts. The clauses include: • The contractor shall observe and comply with the *Air Pollution Control Ordinance* and its subsidiary regulations, particularly the *Air Pollution Control (Construction Dust) Regulation*. • The contractor shall undertake at all times to prevent dust nuisance as a result of the construction activities. • The contractor shall ensure that there will be adequate water supply / storage for dust suppression. • The contractor shall devise, arrange	All construction sites / construction phase / upon completion of all construction activities	Contractor		✓		- Recommended Pollution Control Clauses for Construction Contracts - APCO - Air Pollution Control (Construction Dust) Regulation

** Des – Design, C – Construction, and O – Operation

EIA Ref.	Environmental Protection Measures	Location / Duration of measures/ Timing of completion of measures	Implementation Agent	Implementation Stages**			Relevant Legislation and Guidelines
				Des	C	O	
	methods of working and carrying out the works in such a manner so as to minimise dust impacts on the surrounding environment, and shall provide experienced personnel with suitable training to ensure that these methods are implemented. • Before the commencement of any work, the contractor may require to submit the methods of working, plant, equipment and air pollution control system to be used on the site for the engineer inspection and approval.						
3.4.1.4	<u>Control on fuel combustion from the use of PMEs</u> • Legal control on the types of fuel allowed for use and their sulphur contents in commercial and industrial processes should be observed. • Only approved or exempted non-road mobile machinery should be allowed to be used in construction sites. • All construction plants are required to use ultra-low-sulphur diesel (ULSD) (defined as diesel fuel containing not more than 0.005% sulphur by weight).	All construction sites / construction phase / upon completion of all construction activities	Contractor		✓		- Air Pollution Control (Fuel Restriction) Regulation - Air Pollution control (Non-road Mobile Machinery) (Emission) Regulation - ETWB-TC(W) No. 19/2005
Operational Phase							
3.7.2.1	Air ventilated from the enclosed structure of the proposed SPS should be treated by deodorising units with odour removal efficiency of at least 99.5% in terms of target odour species, i.e. H_2S, before discharging to the atmosphere. The exhaust outlet of the deodorising units should be located away from the nearby air sensitive receivers as far as	Sai O Trunk Sewer SPS / Design and Operational phases	Project Proponent	✓		✓	EIAO-TM

** Des – Design, C – Construction, and O – Operation

EIA Ref.	Environmental Protection Measures	Location / Duration of measures/ Timing of completion of measures	Implementation Agent	Implementation Stages**			Relevant Legislation and Guidelines
				Des	C	O	
	practicable, i.e. facing east of the Sai O Trunk Sewer SPS.						
3.6.2.2 & 3.7.2.1	In addition to the deodorising units, the following measures should be implemented to minimise the odour impacts from the proposed SPS: • The odour sources including inlet chamber, coarse screen channels, distribution chamber and wet wells should be enclosed with air- and water-tight lids at all times except during checking, maintenance and cleaning; • Negative pressure should be maintained within the facilities; • Screening wastes should be stored in a covered container or sealed plastic bag and handled carefully inside the screen houses before transporting outside the SPS building; • Screening wastes should be regularly removed from the proposed SPS by a reputable waste collector. They should be transported in an enclosed type carrier or vehicle and disposed of on the same working day; and • The deodorising units should be regularly checked and maintenance to maintain the odour removal efficiency.	Sai O Trunk Sewer SPS/ Design and Operational phases	Project Proponent	✓		✓	

** Des – Design, C – Construction, and O – Operation

Table B-2 Implementation Schedule of the Proposed Mitigation Measures for Noise Impact

EIA Ref.	Environmental Protection Measures	Location / Duration of measures / Timing of completion of measures	Implementation Agent	Implementation Stages**			Relevant Legislation and Guidelines
				Des	C	O	
Construction Phase							
4.8.1.2	Good Site Practice The site practices listed below should be followed during construction works: • Only well-maintained PME to be operated on site and should be serviced regularly during construction; • Silencers or mufflers on construction equipment should be utilised (if appropriate) and should be properly maintained during the construction; • Mobile plant, if any, should be sited as far away 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 to direct noise 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	All construction sites / construction phase / upon completion of all construction activities	Contractor		✓		-
4.8.1.3 – 4.8.1.4 & Table 4.7	Use of Quiet PME The Contractors may adopt alternative quiet PME as long as it can be demonstrated that they would not result in construction noise impacts worse than those predicted in this EIA Report. Use of quiet plant should be made reference to the Powered Mechanical Equipment (PME) listed in the Technical	All active construction sites / construction phase / upon completion of all construction activities	Contractor		✓		- EIAO-TM - Noise Control Ordinance (NCO)

** Des – Design, C – Construction, and O – Operation

EIA Ref.	Environmental Protection Measures	Location / Duration of measures / Timing of completion of measures	Implementation Agent	Implementation Stages**			Relevant Legislation and Guidelines
				Des	C	O	
	Memorandum or the Quality Powered Mechanical Equipment (QPME) / other commonly used PME listed in Environmental Protection Department (EPD) web pages as far as possible which includes the Sound Power Level (SWLs) for specific quiet PME.						
4.8.1.5	<u>Use of Movable Noise Barriers/Acoustic Mats</u> Movable noise barriers that can be placed close to the construction equipment and moved along with the PME are effective for screening noise from NSRs. A typical design which has been used locally is a wooden framed barrier with a cantilevered upper portion of superficial density no less than 10 kg/m² on a skid footing with internal sound absorptive lining. This measure is particularly effective for low level zone of NSRs. A longer cantilevered top cover would be required to achieve screening benefits at upper floors of NSRs. The Contractor shall be responsible for the design and actual position of the movable noise barriers with due consideration given to the position and size of the PME, and the requirement of intercepting the line-of-sight from the NSRs to the PME, as well as ensuring that the barriers should have no opening and gap. It is anticipated that properly designed noise barriers would achieve a 5 dB(A) reduction for mobile PME and a 10 dB(A) reduction for static PME. Acoustic mat with surface mass of not less than 7kg/m2 would be used for plant items such as piling, oscillator and a 10 dB(A) noise reduction is anticipated.	All active construction sites / construction phase / upon completion of all construction activities	Contractor		✓		- EIAO-TM - NCO

** Des – Design, C – Construction, and O – Operation

EIA Ref.	Environmental Protection Measures	Location / Duration of measures / Timing of completion of measures	Implementation Agent	Implementation Stages**			Relevant Legislation and Guidelines
				Des	C	O	
4.8.1.7	Scheduling of Noisy Activities to outside Examination Period of N2 To minimise the construction noise impact on N2, the use of piling (oscillator) in ELS and concurrent use of concrete lorry mixer with other PMEs in steel fixing and concreting of structure should be avoided during the examination period of N2. Contractor should keep close communication with the operator of HKBTS to obtain the updated schedule of examination at the time conducting of the relevant construction works.	All active construction sites / construction phase / upon completion of all construction activities	Contractor		✓		- EIAO-TM
Operational Phase							
4.8.2.1	Install silencers or other acoustic treatment equipment at the outlet of the ventilation fans and exhaust fan of the deodorizing unit, which openings would be facing away from the nearest NSRs, i.e. towards to the eastern side of the SPS, with reference to "Good Practices on Ventilation System Noise Control" published by EPD.	Sai O Trunk Sewer SPS / Design and Operational Phases	Project Proponent	✓		✓	- EIAO-TM - NCO - Good Practices on Ventilation System Noise Control
4.8.2.3	The following best practices be implemented as far as practicable to further minimise any potential impacts: • Quieter plant should be chosen as far as practical; • Include noise levels specification when ordering new plant items; • All openings, including louvres for ventilation and machine room doors should be oriented away from the NSRs as far as practicable;	Sai O Trunk Sewer SPS / Design and Operational Phases	Project Proponent and Operator.	✓		✓	-

** Des – Design, C – Construction, and O – Operation

EIA Ref.	Environmental Protection Measures	Location / Duration of measures / Timing of completion of measures	Implementation Agent	Implementation Stages**			Relevant Legislation and Guidelines
				Des	C	O	
	• Silencers, acoustic louvres or acoustic doors should be used where necessary; and • Develop and implement a regularly scheduled plant maintenance programme so that plant items are properly operated and serviced. The programme should be implemented by properly trained personnel.						

** Des – Design, C – Construction, and O – Operation

Table B-3 Implementation Schedule of the Proposed Mitigation Measures for Water Quality Impact

EIA Ref.	Environmental Protection Measures	Location/Duration of measures/ Timing of completion of measures	Implementation Agent	Implementation Stages**			Relevant Legislation and Guidelines
				Des	C	O	
Construction Phase							
5.8.1.1	Construction Site Runoff Proper site management measures should be implemented to control site runoff and drainage, and thereby prevent high sediment loadings from entering nearby watercourses. The contractor should follow the practices, and be responsible for the design, construction, operation and maintenance of all the mitigation measures as specified in ProPECC PN 1/94 *"Construction Site Drainage*". The design of the mitigation measures should be submitted by the contractor to the engineer for approval. These mitigation measures should include the following practices: • At the start of site establishment, perimeter cut-off drains to direct off-site water around the site should 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 should be provided on site to direct storm water to silt removal facilities. • Sand / silt removal facilities such as sand / silt traps and sediment basins should be provided to remove sand / silt particles from runoff to meet the requirements of the TM standard under the *WPCO*. The design of efficient silt removal facilities should be	All construction sites / construction phase / upon completion of all construction activities	Contractor		✓		- 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) - The Practice Note for Professional Persons on Construction Site Drainage (ProPECC PN 1/94)

** Des – Design, C – Construction, and O – Operation

EIA Ref.	Environmental Protection Measures	Location/Duration of measures/ Timing of completion of measures	Implementation Agent	Implementation Stages**			Relevant Legislation and Guidelines
				Des	C	O	
	based on the guidelines in Appendix A1 of ProPECC PN 1/94, which states that the retention time for silt / sand traps should be 5 minutes under maximum flow conditions. • All drainage facilities and erosion and sediment control structures should always be regularly inspected and maintained to ensure proper and efficient operation and particularly during rainstorms. Deposited silt and grit should be regularly removed, at the onset of and after each rainstorm to ensure that these facilities are functioning properly at all times. • Measures should be taken to minimise the ingress of site drainage into excavations. Water pumped out from foundation excavations should be discharged into storm drains via silt removal facilities. • If surface excavation works cannot be avoided during the wet season (April to October), temporarily exposed slope / soil surfaces should be covered by a tarpaulin or other means, as far as practicable, and temporary access roads should be protected by crushed stone or gravel, as excavation proceeds. Interception channels should be provided (e.g. along the crest / edge of the excavation) to prevent storm runoff from washing across exposed soil surfaces. Arrangements should always be in place to ensure that adequate surface protection measures can be safely carried out well before the arrival of a rainstorm.						

** Des – Design, C – Construction, and O – Operation

EIA Ref.	Environmental Protection Measures	Location/Duration of measures/ Timing of completion of measures	Implementation Agent	Implementation Stages**			Relevant Legislation and Guidelines
				Des	C	O	
	Other measures that need to be implemented before, during and after rainstorms are summarised in ProPECC PN 1/94. • All vehicles and plant should be cleaned before leaving a construction site. An adequately designed and sited wheel washing facility should be provided at every construction site exit where practicable. Wash-water should have sand and silt settled out and removed at least on a weekly basis. The section of access road leading to, and exiting from, the wheel-wash bay to the public road should be paved with sufficient backfall toward the wheel-wash bay to prevent vehicle tracking of soil and silty water to public roads and drains. • Open stockpiles of construction materials or construction wastes on-site should be covered with tarpaulin or similar fabric during rainstorms.						
5.8.1.2 – 5.8.1.3	<u>General Construction Activities</u> • Debris and refuse generated on-site should be collected, handled and disposed of properly to avoid entering any nearby water bodies and public drainage system. • Stockpiles of cement and other construction materials should be kept covered when not being used. • Oils and fuels should only be used and stored in designated areas, which have pollution prevention facilities. • All fuel tanks and storage areas should be	All construction sites / construction phase / upon completion of all construction activities	Contractor		✓		- EIAO-TM - WPCO - ProPECC PN 1/94 - Waste Disposal Ordinance (WDO)

** Des – Design, C – Construction, and O – Operation

EIA Ref.	Environmental Protection Measures	Location/Duration of measures/ Timing of completion of measures	Implementation Agent	Implementation Stages**			Relevant Legislation and Guidelines
				Des	C	O	
	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. Rainwater in the bunds should be cleared after each rain event. Waste oils, fuels and solvents collected within the bund should be handled and treated as chemical waste.						
5.8.1.4	Sewage Effluent Temporary sanitary facilities, such as portable chemical toilets, should be employed on-site where necessary to handle sewage from the workforce. A licensed contractor would be responsible for appropriate disposal of waste matter and maintenance of these facilities.	All construction sites / construction phase / upon completion of all construction activities	Contractor		✓		- WPCO - EIAO-TM - TM-DSS - WDO
5.8.1.5	Construction Works in Close Proximity of Inland Waters The practices outlined in ETWB TC (Works) No. 5/2005 "*Protection of natural streams/rivers from adverse impacts arising from construction works*" should be adopted where applicable to minimise the water quality impacts upon any natural streams or surface water systems.	All construction sites / construction phase / upon completion of all construction activities	Contractor		✓		- WPCO - EIAO-TM - ETWB TC (Works) No. 5/2005
Operational Phase							
5.7.2.5	(i) Designs to safeguard the normal operation of the SPS *(a) Secure Electrical Power Supply at SPS* • Backup power supply in the form of dual-transformer and switchgear, and dual / ring circuit power supply by CLP Power Hong Kong Ltd. (CLP) will be provided to secure electrical power supply. According to CLP's	Sai O Trunk Sewer SPS / Design and Operational Phases	Project Proponent	✓		✓	- WPCO

** Des – Design, C – Construction, and O – Operation

EIA Ref.	Environmental Protection Measures	Location/Duration of measures/ Timing of completion of measures	Implementation Agent	Implementation Stages**			Relevant Legislation and Guidelines
				Des	C	O	
	performance standard and track records, their supply reliability reaches 99.99% and electricity provision will be restored within 2 hours after any unlikely fault outage. The backup as mentioned above further enhanced the security and reliability. *(b) Designs to Avoid / Minimise Equipment Failure* • Two (2) duty and two (2) standby pumps will be provided to prevent interruption of normal operation of the SPS during breakdown or maintenance of the duty pumps; • Mechanically raked bar screen will be provided to remove large object, stones, debris, etc. and thus, protecting the downstream equipment of the SPS against physical damage. One duty and one standby screen will be designed to secure the reliability and redundancy of the operation; • Provision of twin rising mains system to maintain normal operation of the proposed SPS during maintenance works by eliminating single point of failure and to minimise the chance of emergency overflow; and • Regular inspection and preventive maintenance of plant equipment to minimise equipment failure.						
5.7.2.5	(ii) <u>Design to facilitate immediate actions to recover normal operation of the SPS in case of irregularities</u> • Provision of a telemetry system with alarms	Sai O Trunk Sewer SPS / Design and Operational Phases	Project Proponent	✓		✓	- WPCO

** Des – Design, C – Construction, and O – Operation

EIA Ref.	Environmental Protection Measures	Location/Duration of measures/ Timing of completion of measures	Implementation Agent	Implementation Stages**			Relevant Legislation and Guidelines
				Des	C	O	
	connecting the proposed Sai O Trunk Sewer SPS to Sha Tin Sewage Treatment Works (Sha Tin STW) to allow close monitoring of the operation of the unmanned SPS. Alarm signal for any malfunction of SPS (such as power failure, abnormal shut down of pumps, etc.) will be sent to the control centre at Sha Tin STW so that immediate actions can be taken in case of irregularities or operation problems of the unmanned facilities. Any failure would be promptly repaired by the operator / its contractor as soon as practicable in advance before sewage bypass to the emergency storage tank.						
5.7.2.5	(iii) <u>Design and measure to temporarily store sewage in case of complete power outage / plant failure</u> • Emergency storage tank, which would provide a holding capacity of approximately 1,717 m3 – equivalent to approximately 2 hours' average dry weather flow (ADWF), will be provided for the proposed Sai O Trunk Sewer SPS to cater for failure of all pumps or complete outage of power supply. • If all the above measures to safeguard and recover normal operations of the SPSs are exhausted, sewage will be tanked away as necessary as a last resort to maximise buffer for emergency storage as far as practicable in case the power outage / plant failure cannot be recovered in time to delay the outflow of raw sewage. Sewage tankers	Sai O Trunk Sewer SPS / Design and Operational Phases	Project Proponent	✓		✓	- WPCO

** Des – Design, C – Construction, and O – Operation

EIA Ref.	Environmental Protection Measures	Location/Duration of measures/ Timing of completion of measures	Implementation Agent	Implementation Stages**			Relevant Legislation and Guidelines
				Des	C	O	
	would be mobilised within one hour since plant failure to tank away the sewage from the Sai O Trunk Sewer SPS as much as possible.						
5.8.2.2	Any incident of emergency bypass from the SPS would follow EPD's "*A Guide on Reporting Sewage Bypass Incidents in Sewage Pumping Stations and Sewers*" and DSD's *"Contingency Plan for Incidents Possibly Encountered in Sewage Treatment Facilities having a Potential of Generating an Environmental Nuisance"* ("Contingency Plan"). The Contingency Plan details the procedures to promptly notify relevant Government Departments [e.g. Environmental Protection Department (EPD),] in the event of emergency overflow that may pollute water sensitive receivers close to the proposed SPS or cause other environmental nuisance as soon as possible within 24 hours of the incident and to conduct joint investigation with EPD to assess the impacts as well as to work out mitigation measures to reduce impact to the environment and public health and to interact with the community if necessary.	Sai O Trunk Sewer SPS / Operational Phase	Project Proponent			✓	- WPCO
5.8.2.3	Best Management Practices (BMPs), e.g. good housekeeping practices, should be implemented to ensure that the operation of the SPS would not pollute the runoff.	Sai O Trunk Sewer SPS / Operational Phase	Project Proponent			✓	- WPCO

** Des – Design, C – Construction, and O – Operation

Table B-4 Implementation Schedule of the Proposed Mitigation Measures for Waste Management Implications

EIA Ref.	Environmental Protection Measures	Location/Duration of measures/ Timing of completion of measures	Implementation Agent	Implementation Stages**			Relevant Legislation and Guidelines
				Des	C	O	
6.5.1.3	Good Site Practices Recommendations for good site practices during the construction phase include: • Nomination of approved personnel, such as a site manager, to be responsible for implementation of good site practices, arrangements for waste collection and effective disposal to an appropriate facility; • Training of site personnel in site cleanliness, concepts of waste reduction, reuse and recycling, proper waste management and chemical waste handling procedures; • Provision of sufficient waste reception / disposal points, and regular collection of waste; • Adoption of appropriate measures to minimise windblown litter and dust during transportation of waste by either covering trucks or by transporting wastes in enclosed containers; • Provision of regular cleaning and maintenance programme for drainage systems, sumps and oil interceptors; • Adoption of a recording system for the amount of wastes generated, recycled and disposed (including the disposal sites); and • Preparation of Waste Management Plan (WMP), as part of the Environmental Management Plan (EMP).	All construction sites / Construction Phase / upon completion of all construction activities	Contractor		✓		- Waste Disposal Ordinance (WDO) - ETWB TC(W) No. 19/2005 - Waste Disposal (Chemical Waste) (General) Regulation - Project Administration Handbook (PAH) for Civil Engineering Works, Section 4.1.3 of Chapter 4
6.5.1.4	Waste Reduction Measures Recommendations to achieve waste reduction are discussed as follow:	All construction sites / Construction Phase / upon completion of all	Contractor		✓		- WDO

** Des – Design, C – Construction, and O – Operation

EIA Ref.	Environmental Protection Measures	Location/Duration of measures/ Timing of completion of measures	Implementation Agent	Implementation Stages**			Relevant Legislation and Guidelines
				Des	C	O	
	• 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; • Recycle any unused chemicals or those with remaining functional capacity; • Maximise the use of reusable steel formwork to reduce the amount of C&D materials; • 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 minimise the amount of waste generated; and • Minimise over ordering and wastage through careful planning during purchasing of construction materials.	construction activities					
6.5.1.6 – 6.5.1.7	<u>Reducing and Reuse of C&D Materials</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 minimise 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	All construction sites / Construction Phase / upon completion of all construction activities	Contractor		✓		- WDO - DEVB TC(W) No.6/2010 - ETWB TC(W) No. 19/2005 Project Administration Handbook (PAH) for Civil Engineering Works, Section 4.1.3 of Chapter 4

** Des – Design, C – Construction, and O – Operation

EIA Ref.	Environmental Protection Measures	Location/Duration of measures/ Timing of completion of measures	Implementation Agent	Implementation Stages**			Relevant Legislation and Guidelines
				Des	C	O	
	potential for reuse. • To minimise off-site disposal of inert C&D material, the excavated inert materials with suitable characteristics / size should be reused on-site as fill material as far as practicable, such as for backfilling of the box culvert and drainage pipe works. • Prior to disposal of non-inert C&D materials, wood, steel and other metals should also be separated for reuse and / or recycle where practicable so as to minimise the quantity of waste to be disposed of to landfill.						
6.5.1.8	<u>Storage of C&D Materials</u> Suitable areas should be designated within the works site boundaries for temporary stockpiling of C&D material. Within stockpile areas, the following measures should be taken to control potential environmental impacts or nuisance: • cover material during heavy rainfall; • locate stockpiles to minimise potential visual impacts; and • minimise land intake of stockpile areas as far as possible.	All construction sites / Construction Phase / upon completion of all construction activities	Contractor		✓		- WDO - ETWB TC(W) No. 19/2005 Project Administration Handbook (PAH) for Civil Engineering Works, Section 4.1.3 of Chapter 4
6.5.1.9	<u>Disposal of C&D Materials</u> • In order to monitor the disposal of C&D materials at the designated public fill reception facility and landfill and to control fly-tipping, a trip-ticket system should be included. • When disposing inert C&D materials at a public filling reception facility, the material shall only consist of soil, rock, concrete, brick, cement plaster / mortar, inert building debris,	All construction sites and Transportation Route of Waste / Construction Phase / upon completion of all construction activities	Contractor		✓		- WDO - DEVB TC(W) No.06/2010 - Land (Miscellaneous Provisions) Ordinance (Cap. 28)

** Des – Design, C – Construction, and O – Operation

EIA Ref.	Environmental Protection Measures	Location/Duration of measures/ Timing of completion of measures	Implementation Agent	Implementation Stages**			Relevant Legislation and Guidelines
				Des	C	O	
	aggregates and asphalt. The material shall be free from marine mud, household refuse, plastic, metals, industrial and chemical waste, animal and vegetable matter, and other material considered to be unsuitable by the Filling Supervisor.						
6.5.1.10 & 6.5.2.2	Chemical Wastes • If chemical waste is produced at the construction site / the SPS, the contractor would be required to register with the EPD as a Chemical Waste Producer. • Good quality 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 explosives, flammable, oxidizing, irritant, toxic, harmful, corrosive, etc. • The contractor shall use a licensed collector to transport and dispose of the chemical wastes at the CWTC or other licensed facility in accordance with the *Waste Disposal (Chemical Waste) (General) Regulation.*	Construction and Operational Phase	Contractor		✓	✓	– WDO – Waste Disposal (Chemical Waste) (General) Regulation – Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes
6.5.1.11 & Table 6.2	General Refuse • General refuse should be stored in enclosed bins or compaction units separate from C&D materials and chemical wastes. • A reputable waste collector should be employed by the contractor to remove general refuse / screenings from the site on a	All construction sites / Construction Phase / upon completion of all construction activities	Contractor		✓		– WDO – Public Health and Municipal Services Ordinance (Cap.132)

** Des – Design, C – Construction, and O – Operation

EIA Ref.	Environmental Protection Measures	Location/Duration of measures/ Timing of completion of measures	Implementation Agent	Implementation Stages**			Relevant Legislation and Guidelines
				Des	C	O	
	regular basis to minimise odour, pest and litter impacts. • Clearly labelled recycling bins should be provided on site to encourage segregation and recycling of aluminium and plastic wastes, and wastepaper to reduce general refuse production. • The contractor should carry out an education programme for workers in avoiding, reducing, reusing and recycling of materials generation. Posters and leaflets advising on the use of the bins should also be provided in the site as reminders. The recyclable waste materials should then be collected by reliable waste recycling agents on a regular basis. • The collected general refuse will be disposed of at NENT landfill.						
6.5.2.1	<u>Screenings from the SPS</u> • The screening filtered by the mechanical raked bar screen would be collected into container and removed with covered container or sealed plastic bag at regular time intervals. • A reputable waste collector should be employed by the operator to remove screenings from the site on a regular basis to minimise odour, pest and litter impacts.	Sai O Trunk Sewer SPS / Operational Phase	Project Proponent			✓	- WDO

** Des – Design, C – Construction, and O – Operation

Table B-5 Implementation Schedule of the Proposed Mitigation Measures for Land Contamination Issues

EIA Ref.	Environmental Protection Measures	Location/Duration of measures/ Timing of completion of measures	Implementation Agent	Implementation Stages**			Relevant Legislation and Guidelines
				Des	C	O	
7.6	Since land contamination issue would not be anticipated, no mitigation measure is considered necessary for the Project.	N/A	N/A	N/A	N/A	N/A	N/A

Table B-6 Implementation Schedule of the Proposed Mitigation Measures for Ecological Impact

EIA Ref.	Environmental Protection Measures	Location/Duration of measures/ Timing of completion of measures	Implementation Agent	Implementation Stages**			Relevant Legislation and Guidelines
				Des	C	O	
Construction Phase							
8.8	Since the ecological impact is anticipated to be low and adverse residual ecological impact is anticipated to be nil, no specific mitigation measures for ecological impact is required.	N/A	N/A	N/A	N/A	N/A	N/A

Table B-7 Implementation Schedule of the Proposed Mitigation Measures for Hazard to Life

EIA Ref.	Environmental Protection Measures	Location/Duration of measures/ Timing of completion of measures	Implementation Agent	Implementation Stages**			Relevant Legislation and Guidelines
				Des	C	O	
9.7	Since hazard to life issue would be insignificant, no mitigation measure is considered necessary for the Project.	N/A	N/A	N/A	N/A	N/A	N/A

** Des – Design, C – Construction, and O – Operation

Table B-8 Implementation Schedule of the Proposed Mitigation Measures for Landscape and Visual Impact

EIA Ref.	Environmental Protection Measures	Location/Duration of measures/ Timing of completion of measures	Implementation Agent	Implementation Stages**			Relevant Legislation and Guidelines
				Des	C	O	
Construction Phase							
Table 10.9	CM1 – Preservation of Trees Trees to be retained in accordance with DEVB TCW No. 4/2020 - *Tree Preservation*.	All active construction sites / construction phase / upon completion of all construction activities	Contractor		√		- DEVB TCW No. 4/2020 and the latest Guidelines on Tree Preservation during Development issued by GLTM Section of DEVB
Table 10.9	CM2 – Compensatory Tree Planting Any trees to be felled under the Project shall be compensated in accordance with DEVB TCW No. 4/2020 - *Tree Preservation*.	All active construction sites / construction phase / upon completion of all construction activities	Contractor		√		- DEVB TCW No. 4/2020 and the latest Guidelines on Tree Preservation during Development issued by GLTM Section of DEVB
Table 10.9	CM3 – Control of Night-time Lighting Glare Any lighting provision of the construction works at night shall be carefully controlled to prevent light overspill to the nearby VSRs and into the sky.	All active construction sites / construction phase / upon completion of all construction activities	Contractor		√		- Charter of External Lighting issued by ENB - Guidelines on Industry Best Practices for External Lighting Installations issued by ENB.
Table 10.9	CM4 – Erection of Decorative Screen Hoarding Decorative Hoarding, which is compatible with the surrounding settings, shall be erected during construction to minimise the potential landscape and visual impacts due to the construction works and activities.	All active construction sites / construction phase / upon completion of all construction activities	Contractor		√		-
Table 10.9	CM5 – 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.	All active construction sites / construction phase / upon completion of all construction activities	Contractor		√		-

** Des – Design, C – Construction, and O – Operation

EIA Ref.	Environmental Protection Measures	Location/Duration of measures/ Timing of completion of measures	Implementation Agent	Implementation Stages**			Relevant Legislation and Guidelines
				Des	C	O	
Table 10.9	CM6 – 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.	All active construction sites / construction phase / upon completion of all construction activities	Contractor		√		-
Operational Phase							
Table 10.10	OM1 - Tree and Shrub Planting to soften the proposed SPS Tree and shrub planting shall be proposed to soften the proposed SPS and enhance the landscape and visual amenity of the Project.	Sai O Trunk Sewer SPS / Design and Operational Phases	Project Proponent	✓		✓	DEVB TCW No. 4/2020 and the latest Guidelines on Tree Preservation during Development issued by GLTM Section of DEVB
Table 10.10	OM2 - Aesthetically pleasing design of the SPS The design of the proposed SPS in the regard of layouts, forms, materials and finishes shall be sensitively designed so as to blend in the structures to the adjacent landscape and visual context.	Sai O Trunk Sewer SPS / Design and Operational Phases	Project Proponent	✓		✓	-
Table 10.10	OM3 - Provision of Green Roof Green Roof shall be proposed to enhance the landscape quality of the proposed SPS and mitigate any potential adverse visual impact on adjacent VSRs.	Sai O Trunk Sewer SPS / Design and Operational Phases	Project Proponent	✓		✓	-
Table 10.10	OM4 - Provision of Vertical Greening Self-climbing species shall be proposed at metal fence wall to soften the proposed SPS and enhance the landscape and visual amenity of the Project.	Sai O Trunk Sewer SPS / Design and Operational Phases	Project Proponent	✓		✓	-

** Des – Design, C – Construction, and O – Operation

Table B-9 Implementation Schedule of the Proposed Mitigation Measures for Cultural Heritage Impact

EIA Ref.	Environmental Protection Measures	Location/Duration of measures/ Timing of completion of measures	Implementation Agent	Implementation Stages**			Relevant Legislation and Guidelines
				Des	C	O	
11.8	Since cultural heritage impact would not be anticipated, no mitigation measure is considered necessary for the Project.	N/A	N/A	N/A	N/A	N/A	N/A

** Des – Design, C – Construction, and O – Operation