APPENDIX A

Implementation Schedule for Recommended Mitigation Measures

Appendix A Implementation Schedule of Recommended Mitigation Measures

EIA Ref.	EM&A Log 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?	What requirements or standards for the measure to achieve?
Air Quality Mitigation Measures							
S3.6.1	S2.4	In order to ensure that dust emission is minimized during the construction phase of the project, relevant dust control requirements set out in the *Air Pollution Control (Construction Dust) Regulation* should be met. The site agent of the Contractor is required to adopt dust reduction measures while carrying out construction works. In particular, the mitigation measures listed below should be adopted where applicable. With the implementation of effective dust control measures, adverse dust impacts from the construction works of the project is not expected. Site clearance and demolition of existing structures • The working area for the uprooting of trees, shrubs, or vegetation or for the removal of boulders, poles, pillars or temporary or permanent structures should be sprayed with water or a dust suppression chemical immediately before, during and immediately after the operation so as to maintain the entire surface wet; • All demolished items (including trees, shrubs, vegetation, boulders, poles, pillars, structures, debris, rubbish and other items arising from site clearance) that may dislodge dust particles should be covered entirely by impervious sheeting or placed in an area sheltered on the top and the 3 sides within a day of demolition; Site boundary and entrance • Vehicle washing facilities including a high pressure water jet should be provided at every discernible or designated vehicle exit point;	Dust control	Contractor	All construction sites	Construction stage (Jan 03 to Apr 07)	EIAO, APCO, Air Pollution Control (Construction Dust) Regulation
S3.6.1	S2.4	• 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, street, service and or other area accessible to the public, hoarding of not less than 2.4m from ground level should be provided along the entire length of that portion of the site boundary except for a site entrance or exit; Access road • Every main haul road (i.e. any course inside a construction site having a vehicle passing rate of higher than 4 in any 30 minutes) should be paved with concrete, bituminous materials, hardcores or metal plates, and kept clear of dusty materials; or sprayed with water or a dust suppression chemical so as to maintain the entire	Dust control	Contractor	All construction sites	Construction stage (Jan 03 to Apr 07)	EIAO, APCO, Air Pollution Control (Construction Dust) Regulation

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		road surface wet; • The portion of any road leading only to a construction site that is within 30m of a discernible or designated vehicle entrance or exit should be kept clear of dusty materials; Use of vehicle • Immediately before leaving a construction site, every vehicle should be washed to remove any dusty materials from its body and wheels; • Where a vehicle leaving a construction site is carrying a load of dusty materials, the load should be covered entirely by clean impervious sheeting to ensure that the dusty materials do not leak from the vehicle;					
S3.6.1	S2.4	Excavation and earth moving • The working area of any excavation or earth moving operation should be sprayed with water or a dusty suppression chemical immediately before, during and immediately after the operation so as to maintain the entire surface wet; • Exposed earth shall be properly treated by compaction, turfing, hydroseeding, vegetation planting or sealing with latex, vinyl, bitumen, shotcrete or other suitable surface stabilizer within 6 months after the last construction activity on the construction site or part of the construction site where the exposed earth lies; Stockpiling of dusty materials • Any stockpile of dusty material should be either covered entirely by impervious sheeting; placed in an area sheltered on the top and the 3 sides; or sprayed with water or a dust suppression chemical so as to maintain the entire surface wet.	Dust control	Contractor	All construction sites	Construction stage (Jan 03 to Apr 07)	EIAO, APCO, Air Pollution Control (Construction Dust) Regulation
S3.6.4	S2.7	All the sludge generated from the STW will be dewatered onsite to more than 30% dry solids content before transporting to the designated landfill site for disposal and will be stored in covered container along the transporting route to avoid the possible odour impact on nearby sensitive receivers. The transportation of the sludge by sea to the disposal location is recommended, as far as practicable, in order to reduce potential air quality impacts from road transportation.	Odour control	DSD	Ngong Ping STW	Operational stage	EIAO, APCO
S3.6.2, S3.6.3	S2.7	In order to mitigate the potential odour impacts from the proposed Ngong Ping STW to an acceptable level, it is recommended that all the major odour sources within the proposed STW namely the inlet work, the sequencing batch reactors, the sludge thickeners, and the emergency storage tank should all be constructed as underground facilities to minimise direct emission of odour to the atmosphere.	Odour control	DSD	Ngong Ping STW	Operational stage	EIAO, APCO

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		Other components of the STW will be constructed as above ground structures. All odour emissions from the underground/above ground facilities mentioned above will be contained by building structures and ventilated to a centralised deodourisation unit. Based on the findings of the EIA study, the H_2S removal efficiency of the deodourisation unit should be 99.5% or better and the H_2S emission rate at the exhaust end of the deodourisation unit should not be more than 50 $\mu g/s$. A backup deodorization unit should be provided to cater for the situation during maintenance or breakdown of the deodorization unit.					
Noise Mitigation Measures							
S4.5.2, S4.5.3	S3.8.3, S3.8.4	*Use of Quiet Plant* The Contractor should obtain particular models of plant that are quieter than standard types given in the GW-TM. Reference can be made to the *British Standard BS5228: Part 1:1997 Control on Construction and Open Sites*.	Noise control	Contractor	All construction sites	Construction stage (Mar 03 to Apr 07)	EIAO, NCO
S4.5.4	S3.8.5	*Using Temporary and Movable Noise Barriers* Movable barriers of 3 to 5 m height with a small cantilevered upper portion and skid footing can be located within a few metres of stationary plant and within about 5 m or more of mobile equipment such as an excavator and mobile crane etc., such that the line of slight to the NSR is blocked by the barriers. It would be possible for the Contractor to provide purpose-built noise barriers or screens constructed of appropriate material (minimum superficial density of 7 kg/m^2) located close to operating PME, in order to reduce the noise impact to the surrounding sensitive uses. Certain types of PME, such as generators and compressors, can be completely screened by portable barriers giving a total noise reduction of 10 dB(A) or more.	Noise control	Contractor	All construction sites	Construction stage (Mar 03 to Apr 07)	EIAO, NCO
S4.5.6	S3.8.7	*Reducing the Numbers of Plants Operating in Critical Areas Close to NSRs* It would be appropriate to restrict the number of operating PME within certain parts of the site that are very close to the NSRs in order to reduce the level of noise impacts.	Noise control	Contractor	All construction sites	Construction stage (Mar 03 to Apr 07)	EIAO, NCO
S4.5.7	S3.8.8	*Good Site Practice*	Noise control	Contractor	All construction	Construction stage	EIAO, NCO

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		The following good site practice should be adopted during the construction phase: The contractor should site noisy equipment and activities as far from sensitive receivers as practical. Also, temporary site offices (and other similar structures) should be located, as far as is possible, such that sensitive receivers are screened by these structures from the line of sight of the construction areas. Intermittent noisy activities should be scheduled to minimise exposure of nearby NSRs to high levels of construction noise. For example, noisy activities could be scheduled at times coinciding with periods when the schools are likely to be unoccupied. Prolonged operation of noisy equipment close to the schools should be avoided. Idle equipment should be turned off or throttled down. Noisy equipment should be properly maintained and used no more often than is necessary. Construction activities should be planned so that parallel operation of several sets of equipment close to a given receiver is avoided. Where possible, the numbers of concurrently operating items of plant should be reduced through sensitive programming. Construction plant should be properly maintained and operated. Construction equipment often has silencing measures built in or added on, e.g. compressor panels, and mufflers. Silencing measures should be properly maintained and utilised.			sites	(Mar 03 to Apr 07)	
S4.5.8 to S4.5.10	S3.8.10, S3.8.11	***Specific Mitigation Measures*** For construction activities of Ngong Ping STW, mitigation level 1 with the use of quiet plant is recommended. For construction of effluent export pipeline, village sewerage and the two local pump chambers, mitigation level 2 with the use of quiet plant and use of movable temporary noise barrier is recommended. For construction of village sewerage, manual construction methods using hand tools, as far as practicable, are recommended in those narrow alleys inside the Ngong Ping Village where the NSRs are close to the construction site to reduce the noise impacts.	Noise control	Contractor	All construction sites	Construction stage (Mar 03 to Apr 07)	EIAO, NCO
S4.5.12		In order to meet both the daytime/evening and night-time noise limits during operational phase of the project, mitigation measures as suggested in the following should be adopted:	Noise control	DSD	Ngong Ping STW	Design and operational stage	EIAO

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		Building Envelope/Enclosure The building envelope holding noisy equipment should be made of suitable materials (e.g. concrete) and design capable of achieving a reduction of 20 dB(A). It should be a complete enclosure with minimal openings for which these openings should not be facing any NSRs in the east or south. The building materials should be of surface density of 25kg/m^2 or higher. Ventilation should not be overlooked as most equipment, such as motors, requires an adequate air supply either to prevent overheating or to enable them to function efficiently. A silenced ventilation system incorporating silencers at the air intakes and discharge openings should be employed. *Layout of Building Structures* It would be beneficial if building structures e.g. plant office capable of screening noisy components could be located in the east side of the site to act as noise screening structures.					
S4.5.14		It is recommended that all pump sets located in Ngong Ping village are to be enclosed in the building envelope with transmission loss more than 31 dB(A) for the façade facing NSRs. The inner surface should be internally lined with 50mm thick sound absorbing material (e.g. fibre glass). The sound transmission loss for the building envelope should be similar to "plastered brick wall" as given in *Table 8* of the "*Good Practices on Pumping System Noise Control*" published by EPD. Ventilation of enclosures should not be overlooked as most equipment, such as motors, requires an adequate air supply either to prevent overheating or to enable them to function efficiently. A silenced ventilation system incorporating silencers at the air intakes and discharge openings should be employed.	Noise control	DSD	Pump chambers at Ngong Ping Village	Design and operational stage	EIAO
Water Quality Mitigation Measures							
S5.4.5	S4.9	The practices outlined in *ProPECC PN 1/94 Construction Site Drainage* should be adopted to minimise the potential water quality impacts from construction site runoff and various construction activities. The recommendation to install perimeter drains to collect site runoff and to properly treat the runoff by settlement tank/treatment system shall apply to all sites including those for mainlaying works.	Water quality control	Contractor	All construction sites	Construction stage (Jan 03 to Apr 07)	WDO, WPCO, PN1/94
S5.4.6	S4.9	A discharge licence should be applied from EPD for discharging effluent from the construction site. The discharge quality is required to	Water quality control	Contractor	All construction sites	Construction stage (Jan 03 to Apr 07)	WDO, WPCO, PN1/94

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		meet the requirements specified in the discharge licence. As project location is an environmentally sensitive area, all the runoff and wastewater generated from the works areas within the water gathering ground should be treated so that it satisfies with all the standards listed in the Technical Memorandum for Group A inland waters. In addition, substances listed in Clause 8.4 of the Technical Memorandum shall not discharge into the water gathering ground. Monitoring of the discharge quality of treated effluent should be part of the environmental monitoring and audit programme. Detailed effluent sampling programme for water quality control during construction phase should be submitted to EPD and WSD for approval prior to commencement of the construction works.					
S5.4.7	S4.9	The construction programme should be properly planned to minimise soil excavation, if any, in rainy seasons. Any exposed soil surfaces should also be properly protected to minimise dust emission. Hydroseeding could be applied to protect exposed slope surfaces, if any.	Water quality control	Contractor	All construction sites	Construction stage (Jan 03 to Apr 07)	WDO, WPCO, PN1/94
S5.4.7	S4.9	No earth, building materials, soil and other materials should be allowed to be stockpiled on site within the water gathering ground. All surplus spoil should be removed from the water gathering ground as soon as practicable. All mud and debris should be removed from any waterworks access roads and associated drainage systems within the water gathering ground. In areas outside the water gathering ground where a large amount of exposed soils exist, earth bunds or sand bags should be provided. Exposed stockpiles should be covered with tarpaulin or impervious sheets at all time. The stockpiles of materials should be placed in the locations away from any stream courses so as to avoid releasing materials into the water bodies. Final surfaces of earthworks should be compacted and protected by permanent work. Haul roads should be paved with concrete and the temporary access roads are protected using crushed stone or gravel, wherever practicable. Wheel washing facilities should be provided at all site exits to ensure that earth, mud and debris would not be carried out of the works areas by vehicles	Water quality control	Contractor	All construction sites	Construction stage (Jan 03 to Apr 07)	WDO, WPCO, PN1/94
S5.4.8	S4.9	Good site practices should be adopted to clean the rubbish and litter on the construction sites so as to prevent the rubbish and litter from dropping into the nearby environment. Construction sites should be cleaned on a regular basis.	Water quality control	Contractor	All construction sites	Construction stage (Jan 03 to Apr 07)	WDO, WPCO, PN1/94
S5.4.9	S4.9	To avoid introducing additional pollution loads into the nearby waters, it is recommended to provide chemical toilets in the works areas. Provision of temporary toilet facilities within the water gathering ground	Water quality control	Contractor	All construction sites	Construction stage (Jan 03 to Apr 07)	WDO, WPCO, PN1/94

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		is subject to the approval of the Director of Water Supplies. All waste should be cleared away daily and disposed outside the water gathering ground. The toilet facilities should not be less than 30 m from any watercourse.					
S5.4.10	S4.9	All canteens/kitchens should be located outside the water gathering ground. Wastewater generated from kitchens, if any, should be collected in a temporary storage tank. A licensed waste collector should be deployed to clean the chemical toilets and temporary storage tank on a regular basis. The collected sewage and wastewater could then be transported to the sewage treatment plants for disposal.	Water quality control	Contractor	All construction sites	Construction stage (Jan 03 to Apr 07)	WDO, WPCO, PN1/94
S5.4.11	S4.9	Notices should be posted at conspicuous locations to remind the workers not to discharge any sewage or wastewater into the nearby environment during the construction phase of the project.	Water quality control	Contractor	All construction sites	Construction stage (Jan 03 to Apr 07)	WDO, WPCO, PN1/94
S5.4.14	S4.9	It is required to 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.	Water quality control	Contractor	All construction sites	Construction stage (Jan 03 to Apr 07)	WDO, WPCO, PN1/94
S5.4.15	S4.9	Any service shop and minor maintenance facilities should be located outside the water gathering ground and should be on hard standings within a bunded area, and sumps and oil interceptors should be provided. Maintenance of vehicles and equipment involving activities with potential for leakage and spillage should only be undertaken with the areas appropriately equipped to control these discharges. Any soil contaminated with chemicals/oils shall be removed from site and the void created shall be filled with suitable materials. Washing the chemicals away is not acceptable as they will contaminate the water gathering ground.	Water quality control	Contractor	All construction sites	Construction stage (Jan 03 to Apr 07)	WDO, WPCO, PN1/94
S5.4.16	S4.9	Storage of oils/chemicals/waste within the water gathering ground should be limited to absolute minimum volume and are to be removed from sites at the earliest opportunity. No storage and discharge of flammable or toxic solvents, petroleum oil or tar and other toxic substances should be allowed within the water gathering ground. Any construction plant which causes pollution to catchwater or water gathering ground due to leakage of oil or fuel should be removed off site immediately. Any soil contaminated with fuel leaked from the plant should be removed off site and the voids arising from removal of contaminated soil should be replaced by suitable material to the approval of the Director of Water Supplies. Any chemicals to be used including disinfectants and deodorants within the water gathering	Water quality control	Contractor	All construction sites	Construction stage (Jan 03 to Apr 07)	WDO, WPCO, PN1/94

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		ground should be subject to the approval of the Director of Water Supplies.					
S5.4.17	S4.9	Disposal of chemical wastes should be carried out in compliance with the Waste Disposal Ordinance. The *Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes* published under the Waste Disposal Ordinance details the requirements to deal with chemical wastes. General requirements are given as follows: Suitable containers should be used to hold the chemical wastes to avoid leakage or spillage during storage, handling and transport. Chemical waste containers should be suitably labelled to notify and warn the personnel who are handling the wastes to avoid accidents. Storage area should be selected at a safe location on site and adequate space should be allocated to the storage area.	Water quality control	Contractor	All construction sites	Construction stage (Jan 03 to Apr 07)	WDO, WPCO, PN1/94
S5.4.18-S5.4.21	S4.9	A detailed emergency plan and clean up procedures should be developed and approved by EPD/WSD before commencement of construction work to deal with accidental spillage of chemicals.	Water quality control	Contractor	All construction sites	Construction stage (Jan 03 to Apr 07)	WDO, WPCO, PN1/94
S5.5.1	S4.8	Ductile iron pipe should be used for all the Ngong Ping village sewers and effluent pipeline for its robustness, because the area is within the water gathering ground. Sealed pipe joints with hatchboxes along the pipeline should be adopted. Maximum distance between manholes should be limited to 60 m to facilitate over-pumping operations during sewer inspection or maintenance. This would also facilitate flow diversion in case of emergency situation during pipe leakage.	Water quality control	DSD	Ngong Ping sewerage system	Design and operational stages	EIAO
S5.5.1	S4.8	Standby units, emergency power generation and emergency storage facilities should be provided at Ngong Ping STW to avoid the need for emergency discharges. An emergency storage tank should be constructed to temporary store both the raw sewage from Ngong Ping sewerage catchment and the effluent of STW to cater for the STW breakdown and bursting of effluent pipe. Furthermore, it is also proposed that the size of the emergency storage tank will be large enough to store 72hr. Sewage/effluent flow (48 hours peak day and 24 hours average day i.e. 2 x 2956 + 1524 = 7436m^3) in ultimate stage. Thus, the volume of the emergency storage tank is about 7600m^3 and the size is about 50m(L) x 40m(W) x 3.8m (D).	Water quality control	DSD	Ngong Ping STW	Design and operational stages	EIAO
S5.5.2	S4.8	Routine flow monitoring should be carried out at both the upstream end (STW) and downstream of the water gathering ground and country park to ensure early detection of any major leakage. An Action Plan should be prepared and should be followed in the event that pipe leakage is suspected or identified. Temporary diversion of effluent to the emergency storage tank at the STW could be arranged to provide no-	Water quality control	DSD	Ngong Ping sewerage system	Design and operational stages	EIAO

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		flow condition for the repair of the effluent pipeline.					
S5.6.107	S4.8	Effluent should be monitored at the outlet chamber of the disinfection unit.	Water quality control	DSD	Ngong Ping STW	Operational stages (upon commissioning of Ngong Ping STW)	EIAO
S5.6.107	S4.8	Marine water quality monitoring should be carried out to verify the findings of the water quality modelling.	Water quality control	EPD	Tai O Creek and Tai O Bay	Operational stage (upon commissioning of Ngong Ping STW)	EIAO
Waste Management							
S6.5.1	S6	A proper Waste Management Plan (WMP) should be submitted to Engineer for approval and implemented. Where waste generation is unavoidable then the potential for recycling or reuse should be explored and opportunities taken. If wastes cannot be recycled, recommendations for appropriate disposal routes should be provided in the WMP. A method statement for stockpiling and transportation of the excavated material and other construction wastes should also be included in the WMP and approved before the commencement of construction. All mitigation measures arising from the approved WMP shall be fully implemented.	Waste minimization and control	Contractor	All construction sites	Construction stage (Jan 03 to Apr 07)	WDO, WBTC 29/2000
S6.5.2	S6	Excavated material to be generated from construction works to be re-used on-site as far as practicable to reduce off-site disposal.	Waste minimization and control	DSD/ Contractor	All construction sites	Design and construction stages	WDO, WRFP, WBTC 2/93, 2/93B, 5/98, 25/99, 25/99A, 25/99C, 4/98, 4/98A, 19/99, 12/2000
		Segregation and storage of different types of waste in different containers, skips or stockpiles to enhance reuse or recycling of materials and their proper disposal.	Waste minimization and control	Contractor	All construction sites	Construction stage (Jan 03 to Apr 07)	
		To encourage collection of aluminium cans by individual collectors, separate labelled bins should be provided to segregate this waste from other general refuse generated by the workforce.					
		Any unused chemicals or those with remaining functional capacity should be recycled.					
		Prior to disposal of C&D waste, recyclable materials should be salvaged for reuse (such as wood and metal) and inert waste utilised as public fill to minimise the quantity of waste to be disposed of to landfill.					
		Proper storage and site practices to minimise the potential for damage or contamination of construction materials.					
S6.5.2	S6	Plan and stock construction materials carefully to minimise amount of waste generated and avoid unnecessary generation of waste.	Waste minimization and control	Contractor	All construction sites	Construction stage (Jan 03 to Apr 07)	WDO, WRFP, WBTC 2/93, 2/93B, 5/98, 25/99, 25/99A, 25/99C, 4/98, 4/98A, 19/99,

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							12/2000
S6.5.3	S6	Nomination of approved personnel, such as a site manager, to be responsible for good site practices, arrangements for collection and effective disposal to an appropriate facility, of all wastes generated at the site. Training of site personnel in proper waste management and chemical handling procedures. Provision of sufficient waste disposal points and regular collection for disposal. Appropriate measures should be employed to minimise windblown litter and dust during transportation of waste by either covering trucks or by transporting wastes in enclosed containers. The Storage of oils/chemicals/waste within the boundary of the water gathering ground should be limited to the absolute minimum volume and are to be removed from sites at the earliest opportunity.	Waste minimization and control	Contractor	All construction sites	Construction stage (Jan 03 to Apr 07)	WDO, WPCO, PN1/94
S6.5.3	S6	Separation of chemical wastes for special handling and appropriate treatment at the Chemical Waste Treatment Facility. Regular cleaning and maintenance programme for drainage systems, silt traps, sumps and oil interceptors. Any mud and debris should be removed from any waterworks access roads and associated drainage systems within the water gathering ground.	Waste minimization and control	Contractor	All construction sites	Construction stage (Mar 03 to Apr 07)	WDO, WPCO, PN1/94
S6.5.4	S6	In order to monitor the disposal of C&D material and solid wastes at public filling areas and landfills, and to control fly-tipping, a trip-ticket system should be included as one of the contractual requirements. If surplus excavated spoil would be reused in land formation projects, the sites for such land formation projects must be clearly identified with written agreement from the relevant third party before such disposal. Assessment of potential environmental impact of such disposal has to be conducted and the above information has to be submitted to EPD for approval before action is taken.	Waste minimization and control	Contractor	All construction sites	Construction stage (Jan 03 to Apr 07)	WBTC No. 5/99, 5/99A
S6.5.5	S6	A recording system for the amount of wastes generated, recycled and disposed (including the disposal sites) should be proposed. Quantities could be determined by weighing each load or other suitable methods.	Waste minimization and control	Contractor	All construction sites	Construction stage (Jan 03 to Apr 07)	WDO
S6.5.7	S6	A collection area should be provided where waste can be stored and loaded prior to removal from site. An enclosed and covered area is preferred to reduce the occurrence of 'wind blown' light material. If an open area is unavoidable for the storage or loading/unloading of wastes, then the area should be bunded and all the polluted surface run-off collected within this area should be diverted into wastewater treatment system. The collection area for waste should be sited away from the Country Park and ecological sensitive areas.	Waste minimization and control	Contractor	All construction sites	Construction stage (Jan 03 to Apr 07)	WDO, WPCO, PN1/94

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S6.5.8	S6	Suitable collection sites around site offices and canteen will be required. For environmental hygiene reasons and to minimize odor, refuse should not be stored for a period exceeding 48 hours, however, removal every 24 hours is preferable.	Waste minimization and control	Contractor	All construction sites	Construction stage (Jan 03 to Apr 07)	WDO
S6.5.8	S6	No canteen should be provided within the water gathering ground.	Waste minimization and control	Contractor	All construction sites	Construction stage (Jan 03 to Apr 07)	WDO
S6.5.9	S6	Provision of temporary toilet facilities within the water gathering ground should be subject to the approval of Director of Water Supplies. All waste should be cleared away daily and disposed outside the water gathering ground. The toilet facilities should not be less than 30 m from any watercourses.	Waste minimization and control	Contractor	All construction sites	Construction stage (Jan 03 to Apr 07)	WDO
S6.5.10	S6	It is required to 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. After use, chemical wastes (e.g. cleaning fluids, solvents, lubrication oil and fuel) should be handled according to the *Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes*. Spent chemicals should be stored and collected by an approved operator for disposal at the Chemical Waste Treatment Facility or other licensed facility in accordance with the Chemical Waste (General) Regulation.	Waste minimization and control	Contractor	All construction sites	Construction stage (Jan 03 to Apr 07)	WDO
S6.5.11	S6	Any service shop and minor maintenance facilities should be located outside the water gathering ground and should be on hard standings within a bunded area, and sumps and oil interceptors should be provided. Maintenance of vehicles and equipment involving activities with potential for leakage and spillage should only be undertaken with the areas appropriately equipped to control these discharges. No storage and discharge of flammable or toxic solvents, petroleum oil or tar and other toxic substances shall be allowed within the water gathering ground. Any chemicals to be used including disinfectants and deodorants within the water gathering ground should be subject to the approval of the Director of Water Supplies.	Waste minimization and control	Contractor	All construction sites	Construction stage (Mar 03 to Apr 07)	WDO, WPCO, PN1/94
S6.5.12 - S6.5.13	S6	No earth, building materials, soil and other materials should be stockpiled within the water gathering ground. All surplus spoil should be removed from the water gathering ground as soon as practicable. Any soil contaminated with fuel leaked from plant should be removed from the water gathering ground and the voids arising from removal of contaminated soil should be replaced by suitable material to the approval of the Director of Water Supplies.	Waste minimization and control	Contractor	All construction sites	Construction stage (Jan 03 to Apr 07)	APCO, NCO, WDO, WPCO, PN1/94

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S6.5.12	S6	Stockpiles of excavated spoil outside the water gathering ground should be covered to minimise run-off during heavy rainstorms and should be located to minimise visual impacts and nuisance related to noise and dust. Stockpiles of excavated spoil should be covered to minimise run-off during heavy rainstorms. Appropriate haul routes should be designated. Elevated levels of suspended solids in surface water should be prevented through appropriate bunding, interceptors, and direction of run-off into settling ponds.	Waste minimization and control	Contractor	All construction sites	Construction stage (Jan 03 to Apr 07)	APCO, NCO, WDO, WPCO, PN1/94
S6.4.1	S6	The sludge generated from Ngong Ping STW should be dewatered to more than 30% dry solids and transported to the landfills.	Waste minimization and control	DSD	Ngong Ping STW	Operational stage	WDO
S6.4.2 - S6.4.4	S6	The operators of future UV disinfection plant should work with the supplier/manufacturer on recycling and reuse of the defective UV lamps as far as possible. Should the disposal of UV lamps be unavoidable, the operators should identify the content of the UV lamp and confirm with EPD whether the UV lamps should be disposed of as chemical waste. If so, the handling and disposal should follow the Chemical Waste (General) Regulation. In handling the UV lamps, cautions should be exerted to avoid breakage of lamps and release of contaminants.	Waste minimization and control	DSD	Ngong Ping STW	Operational stage	WDO, WRFP
S6.4.5 - S6.4.6	S6	Unless the spent fluids from the wet scrubber system are treated on-site to meet the discharge standards stipulated in the TM under WPCO, they should be handled and disposed of according to the requirements under the Chemical Waste (General) Regulation.	Waste minimization and control	DSD	Ngong Ping STW	Operational stage	WDO, WPCO
Landscape and Visual Mitigation Measures							
S7	S5	Works areas to be minimised as far as possible to avoid impact on existing features	To mitigate landscape and visual impacts	Contractor	All construction sites	Throughout construction period	EIAO
		Minimised the extent of excavation for temporary and permanent works	To mitigate landscape and visual impacts	Contractor	All construction sites	Throughout construction period	EIAO
		Physical measures to prevent access into areas outside the limits of works	To mitigate landscape and visual impacts	Contractor	Public areas	Throughout construction period	EIAO
		Retention and protection of existing woodland trees	To mitigate landscape and visual impacts	Contractor	All construction sites	Throughout construction period	EIAO / A Guide to Tree Planting and Maintenance in Urban Hong Kong
		Decorative hoarding along publicly assessable boundaries of the site	To mitigate landscape and visual impacts	Contractor	Public areas	Throughout construction period	EIAO

EIA Ref.	EM&A Log 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?	What requirements or standards for the measure to achieve?
		Topsoil stripped and stored for re-use in the construction of the soft landscape works	To mitigate landscape and visual impacts	Contractor	All construction sites	Throughout construction period	EIAO
		Grass Hydroseeding of slopes as soon as they are complete	To mitigate landscape and visual impacts	Contractor	Newly formed cut slopes	As soon as they are formed	EIAO / A Guide to Tree Planting and Maintenance in Urban Hong Kong / GEO Publication 1/2000
		Grass hydroseeding and planting of native shrubs and trees to provide green backdrop to the development, and to blend the slope into the surrounding natural slopes, and to compensate for grass and shrubs and trees lost during construction	To mitigate landscape and visual impacts	Contractor	Newly formed cut slopes, and boundary areas	As soon as possible	EIAO / A Guide to Tree Planting and Maintenance in Urban Hong Kong / GEO Publication 1/2000
		Grass hydroseeding (with groundcover) on top of the underground structures within STW site	To mitigate landscape and visual impacts	Contractor	On top of underground structures as shown Landscape Proposal	As soon as possible	EIAO / A Guide to Tree Planting and Maintenance in Urban Hong Kong
		Grass hydroseeding and tree and shrub planting to screen elevated structures along the souutheastern boundary of STW site, to provide visual interest, and to provide shade and shelter.	To mitigate landscape and visual impacts	Contractor	Roadside area as shown on Landscape Proposal	As soon as possible	EIAO / A Guide to Tree Planting and Maintenance in Urban Hong Kong
		Sensitive architectural and chromatic treatment of the elevated structures	To mitigate landscape and visual impacts	Contractor	STW site	During structural construction	EIAO
Cultural Heritage Mitigation Measures							
S10.8.2	S8	A series of historic ruins at Wang Hang Tsuen, Heng Mei and Kwun Yam Shan and some of these ruins are located very close to the proposed alignment. The entire construction workforce should be informed of the locations of these historic ruins and special attention should be given during the entire process of project construction to avoid any damage to these historical remains. Construction sites which are close to these historical ruins should be posted with notices at conspicuous locations to remind the workers not to make any disturbance to the ruins.	To avoid any damage to historic ruins	Contractor	All construction sites	Construction stage (Jan 03 to Apr 07)	Antiquities and Monuments Ordinance
Ecological Mitigation Measures							

EIA Ref.	EM&A Log 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?	What requirements or standards for the measure to achieve?
S8.5.7	S7	Special attention should be paid to the stream in which Romer's Tree Frog has been observed breeding (Drawing No. 23400/EN/067a). It is recommended that earthworks near this stream should not be carried out during the breeding season of Romer's Tree Frog (March to September).	Protect ecological sensitive receivers	Contractor	Breeding stream of Romer's Tree Frog (Ref: Drawing No. 23400/EN/067a) .	Construction stage (Jan 03 to Apr 07)	EIAO
S8.6	S7	Prevention of surface runoff entering streams or estuary	Control of site runoff	Contractor	Any works area approaching streams or estuary	Construction stage (Jan 03 to Apr 07)	PN 1/94, WPCO