Table C4 Implementation Schedule of Recommended Mitigation Measures – Waste Management Implication

EIA Ref.	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Who to implement the measures?	Location / Timing of implementation of Measures			What requirements or standards for the measures to achieve?
				D	C	O	
Construction Phase (Non Designated Project Element)							
S.6.5.1	During the planning stage, waste management measures will be implemented that will aim to recover, avoid and minimise the constructed waste generated on site by utilising the following general approach: - Reduce wastage; - Reuse materials, where possible; - Recycle materials, where possible; and - Dispose of materials after all other options have been considered.	Waste management during construction	Contractors		√		-

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6.5.2	Adverse impacts from waste management are not expected, provided that good site practices are strictly followed. Recommendations for good site practices during the construction activities include: - The Contractor shall prepare a WMP in accordance with the requirements set out in the ETWB TCW No. 19/2005, Waste Management on Construction Site, for the ER's approval. The WMP shall include monthly and yearly Waste Flow Tables that indicate the amounts of waste generated, recycled and disposed of (including final disposal site); - The Contractor's waste management practices and effectiveness shall be audited by the ER on regular basis; - The Contractor shall provide training for site staff for the concept of site cleanliness and appropriate waste management procedures, including waste reduction, reuse and recycling; - Sufficient waste disposal points and regular collection of waste shall be provided; - Trucks with covering for the open-box bed and enclosed container shall be used to minimise windblown litter and dust during transportation of waste; - Regular cleaning and maintenance programme for drainage systems, pumps and oil interceptors; - Separation of chemical wastes for special handling and appropriate treatment at a Chemical Waste Treatment Facility; - Encourage collection of aluminium cans, paper and plastic bottles by providing separate labelled bins to enable these wastes to be segregated from other general refuse generated by the workforce; - 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; - A recording system for the amount of wastes generated, recycled and disposed (including disposal sites) should be proposed; and - Plan and stock construction materials carefully to minimise amount of waste generated and avoid unnecessary generation of waste.	Waste management during construction	ER and Contractors		√		ETWB TCW No. 19/2005, Waste Management on Construction Sites; Waste Disposal Ordinance; and Waste Disposal (Chemical Waste) (General) Regulation

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S.6.5.3 to S.6.5.6	C&D Materials With good site management it can reduce the over-ordering of C&D materials such as concrete and mortars. Alternatives such as steel frameworks and plastic fencing can be considered to increase the chances for reuse. In order to minimise the potential environmental impacts resulting from collection and transportation of C&D materials for off-site disposal, the excavated materials comprising fill materials should be reused on-site as backfilling materials as far as practicable. C&D waste, such as wood, plastic, steel and other metals should be reused or recycled and, as a last resort, disposed of to landfill sites. A suitable area should be designated within the site for temporary stockpiling of C&D materials and to facilitate the sorting process. 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. Reference can be made to Development Bureau TC(W) No. 6/2010 "Trip Ticket System for Disposal of Construction and Demolition Materials" for details. The C&D materials to be disposed of at public filling reception facilities shall be materials only consist of brick, concrete, cement plaster, soil and inert building debris. The materials shall be free from plastics, chemical waste, industrial metals and other materials that are considered unsuitable at the facility.	Waste management during construction	Contractors		√		ETWB TCW No 6/2010, Waste Disposal Ordinance
S.6.5.7	General Refuse General refuse should be stored in enclosed bins or compaction units separate from C&D materials. A reputable waste collector should be employed by the Contractor to remove general refuse from the site regularly, separately from C&D materials. An enclosed and covered area is preferred to reduce the occurrence of wind-blown light materials. In addition, a sufficient number of enclosed bins shall be provided on site for containment of general refuse to prevent visual impacts and nuisance to the sensitive surrounding.	Waste management during construction	Contractors		√		Waste Disposal Ordinance

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S.6.5.8 and S.6.5.9	Chemical Waste For the disposal of chemical wastes produced at the construction site, the Contractor is required to register with the EPD as a CWP and to follow the requirements stated in the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes. Good quality containers compatible with the chemical wastes should be used. Appropriate labels should be securely attached on each chemical waste container indicating the chemical characteristics of the chemical waste, such as explosives, flammable, oxidising, irritant, toxic, harmful, corrosive, etc. The Contractor shall also use a licensed waste collector engaged to transport and dispose of the chemical wastes in accordance with the Waste Disposal (Chemical Waste) (General) Regulation	Waste management during construction	Contractors		√	√	Waste Disposal (Chemical Waste) (General) Regulation
S.6.5.10	Sewage Chemical toilets to be provided on-site shall be regularly cleaned and the night-soil collected and transported by a licensed contractor to a Government Sewage Treatment Works facility for disposal	Waste management during construction	Contractors		√		Waste Disposal Ordinance

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S.6.5.11 and S.6.5.12	Dredged Marine Sediment Dredged marine sediments to be disposed of at different marine disposal sites should be stored separately to avoid cross contaminated. To minimise potential odour nuisance, covers should be provided for the storage tank or barges. Different category of marine sediments should be disposed of at the designated marine designated sites. The testing results and sediment quantities for each category presented in this report are for EIA purposes only. For allocation of sediment disposal sites and application of marine dumping permit, another proposal for sampling and chemical testing of the sediment will be prepared and submitted to the EPD for approval following the procedures in ETWB TC(W) No. 34/2002. The approved detailed sampling and chemical testing will be carried out prior to the commencement of the dredging activities to confirm the sediment disposal methods. The contamination levels of the sediment to be dredged will be analysed and recorded. After carrying out the sampling and testing, a SQR will be prepared for EPD approval as required under the DASO to agree and confirm the quantities and extent of the contamination of the sediments prior to the dredging works. The SQR will include the sampling details, the chemical testing results, quality control records, proposed classification and delineation of sediment according to the requirements of ETWB TC(W) No. 34/2002.	Waste management during construction	Contractors		√		ETWB TC(W) No. 34/2002, Dumping at Sea Ordinance

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Construction Phase (Designated Project Element - Construction of submarine sewage outfall, Item F.6)							
S.6.5.7	General Refuse General refuse should be stored in enclosed bins or compaction units separate from C&D materials. A reputable waste collector should be employed by the Contractor to remove general refuse from the site regularly, separately from C&D materials. An enclosed and covered area is preferred to reduce the occurrence of wind-blown light materials. In addition, a sufficient number of enclosed bins shall be provided on site for containment of general refuse to prevent visual impacts and nuisance to the sensitive surrounding.	Waste management during construction	Contractors		√		Waste Disposal Ordinance
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Construction Phase (Designated Project Element - Sewers works at Nam Chung Tsuen, Item Q.1)							
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Operational Phase (Non Designated Project Element)							
S.6.5.13	The major waste generated during the operational phase will be screenings, silt and debris, grits and dewatered sludge. The screenings, silt and debris and grits are considered similar in nature to general refuse and will be disposed of at landfill sites regularly by a reputable waste collector to reduce pest, odour and litter impacts. The dewatered sludge will be disposal of at Sludge Treatment Facilities.	Waste management	DSD			√	Waste Disposal Ordinance
S.6.5.14	For chemical waste generated during the operational phase, the handling procedures and disposal method are the same as those presented in Section 6.5.8 of EIA.	Waste management	DSD			√	Waste Disposal (Chemical Waste) (General) Regulation

Legend:
D – Design, C – Construction, O - Operation
BD – Building Ordinance
ETWB TCW – Environmental and Transport Works Bureau Technical Circular
HKPSG – Hong Kong Planning Standards and Guidelines
EIAO-TM – Technical Memorandum on Environmental Impact Assessment Process
TPO – Town Planning Ordinance
WBTC – Works Bureau Technical Circulars
Remark: * means the specified measures for the DP component