Appendix 18.3 – Details of Schedule 2 Designated Projects for Environmental Permit Application

Table A Project Scope and Key Mitigation Measures for DP1

Title of Designated Project	Nature of Designated Project	Location of Designated Project	Scale and Scope of Works	Key Mitigation Measures
Construction and operation of carriageway bridge at TKO 132	A carriageway bridge for motor vehicles the length between abutments for which is more than 100 m, with bridge piers over the sea supporting the bridge	The location of the Project is shown in Figure A.	A single 2-carriageway road in the form of viaduct structure will be constructed near TKO-LTT to provide a direct and convenient connection to the proposed facilities at TKO 132	Air Quality • Dust suppression measures stipulated in Air Pollution Control (Construction Dust) Regulation and good site practices should be carried out to further minimise construction dust impact. Noise Impact • Use of quieter construction method • Use of quality PME • Careful schedule of use of PME among nearby construction work site • Grouping of PME • Use of movable noise barriers and full enclosure • Submission of Construction Noise Management Plans Water Quality • Design measures to contain and control material, debris, spoil and wastewater generated from the bridge pier construction. • Deployment of single layer silt curtain around the marine construction works as precautionary measure. • Road gullies with standard design to collect surface runoff during operational phase. Waste Management • Preparation of a Waste Management Plan in accordance with the ETWB TCW No. 19/2005 Environmental Management on Construction Sites and submitted it to the Engineer for approval. • Segregate and store different types of waste in different containers, skips or stockpiles to enhance reuse or recycling of materials and their proper disposal. • Stockpiling area should be provided with covers and water spraying system to prevent materials from being wind-blown or washed away. • Waste hauler with appropriate permits should be employed by the Contractor for the collection and transportation of waste from works areas to respective disposal outlets. • 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. 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 also be installed at the vehicular entrance and exit of the site to monitor handling of C&D materials disposal.

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				To prohibit illegal dumping and landfilling of C&D materials, the dump trucks engaged on site should be equipped with GPS or equivalent automatic system for real time tracking and monitoring of their travel routings, parking locations and disposal activities. • Any floating refuse trapped within the Project area will be collected by the Contractor and disposed together with other general refuse. Apart from collecting and storing waste with good waste management practice on site to avoid having waste transported to water bodies under extreme weather conditions, the contractor should be responsible for the collection of refuse, if any, within the works area. Contractor shall collect and remove floating refuse at regular intervals on a daily basis to keep water bodies within the Project area and the neighbouring water free from rubbish during the construction phase. In case of floating refuse is identified, the floating materials should be removed and eventually stored and disposed of together with the general refuse, after separating the recyclables for recycling Ecology • Pre-construction detailed coral survey shall be carried out to identify the location, condition number, and translocation feasibility of coral colonies within the affected subtidal habitats. Translocation of affected coral species shall be conducted if necessary • The associated foundation and pier of the carriageway bridge would locate away from the downstream section to avoid direct impact and blockage of S2, which the fish species of conservation importance, Philippine Neon Goby, was previously recorded, and works including NTHMMs and construction of carriageway bridge would be also conducted at least 20m away from S2. • Mitigation measures suggested in other sections including noise and water quality can also minimise the indirect ecological impact caused by the construction and operation of carriageway bridge Fisheries • Mitigation measures suggested in water quality section can also minimise the indirect fisheries impact caused by the construction and operation of carriageway bridge Landscape and Visual Impact • During construction phase, mitigation measures recommended include preservation of existing vegetation, reinstatement of temporarily disturbed landscape areas, erection of decorative screen hoarding, preservation of natural coastline, and management of construction activities and facilities.

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				• During operational phase, mitigation measures recommended include aesthetically pleasing design of aboveground structures, provision of buffer screen planning, roadside greening, compensatory planting and landscape treatments on slope or retaining. Cultural Heritage • If antiquities or supposed antiquities under the Antiquities and Monuments Ordinance (Cap. 53) are discovered during the construction works within the Project boundary of TKO 137 and TKO 132, the project proponent is required to inform AMO immediately for discussion of appropriate mitigation measures to be agreed by AMO before implementation by the project proponent to the satisfaction of AMO. EM&A Requirements • EM&A personnel (including Environmental Team (ET) and Independent Environmental Checker (IEC)) shall be employed before commencement of construction of the project and EM&A Manual shall be updated to include the latest EM&A requirements in accordance with the information and recommendations in the EM&A Manual and by taking into account any specific site conditions.

Table B Project Scope and Key Mitigation Measures for DP2

Title of Designated Project	Nature of Designated Project	Location of Designated Project	Scale and Scope of Works	Key Mitigation Measures
Reclamation works at TKO 137 and TKO 132	(i) Reclamation works (including associated dredging works) more than 5 ha in size; (ii) Reclamation works (including associated dredging works) that are of more than 1 ha in size, and a boundary of which is less than 100 m from the nearest boundary of an existing residential area	The location of the Project is shown in Figure B.	- around 20 ha of land will be formed by reclamation. The reclamation is located at the barging basin at the north of TKO 137 and area along the southwest shoreline of TKO 137. - TKO 132 will be formed by reclamation (about 19ha) and by site formation (about 1ha) to house the Public Facilities	Air Quality • Dust suppression measures stipulated in Air Pollution Control (Construction Dust) Regulation and good site practices should be carried out to further minimise construction dust impact. Noise Impact • Use of quieter construction method • Use of quality PME • Careful schedule of use of PME among nearby construction work site • Grouping of PME • Use of movable noise barriers and full enclosure • Submission of Construction Noise Management Plans Water Quality / Sewage and Sewerage Treatment • Use of non-dredged reclamation method for TKO 137 and TKO 132 during construction phase. • Control of production rates for sand blanket laying, underwater filling and dredging works for TKO 137 and TKO 132 during construction phase. • Carrying out underwater filling behind leading seawall and careful planning of reclamation sequence for TKO 137 and TKO 132 during construction phase. • Deployment of single layer silt curtain around the sand blanket laying, underwater filling and dredging works for TKO 137 during construction phase. • Deployment of double silt curtains around the sand blanket laying, underwater filling and dredging works for TKO 132 during construction phase • Control of maintenance dredging rate and deployment of double silt curtains around the maintenance dredging works for TKO 132 during operational phase. Waste Management • Preparation of a Waste Management Plan in accordance with the ETWB TCW No. 19/2005 Environmental Management on Construction Sites and submitted it to the Engineer for approval. • Segregate and store different types of waste in different containers, skips or stockpiles to enhance reuse or recycling of materials and their proper disposal. • Stockpiling area should be provided with covers and water spraying system to prevent materials from being wind-blown or washed away. • Waste hauler with appropriate permits should be employed by the Contractor for the collection and transportation of waste from works areas to respective disposal outlets. • 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. A recording system for the

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				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 also be installed at the vehicular entrance and exit of the site to monitor handling of C&D materials disposal. To prohibit illegal dumping and landfilling of C&D materials, the dump trucks engaged on site should be equipped with GPS or equivalent automatic system for real time tracking and monitoring of their travel routings, parking locations and disposal activities. • The sediment should be removed, handled, transported and disposed of in a manner that would minimise adverse environmental impacts. For TKO 137, removed Category L sediment is proposed to be treated using cement stabilization / solidification (S/S) technique and reused as backfilling materials within reclamation area or by other concurrent projects before considering the marine disposal option. Possibility of reusing the removed sediment will be subject to further review during the detailed design and construction stages. • Requirements of the Air Pollution Control (Construction Dust) Regulation, where relevant, shall be adhered to during removal, transportation and disposal of the sediment. • In order to minimize the exposure to contaminated materials, workers shall, if necessary, wear appropriate personal protective equipment (PPE) when handling contaminated sediment. Adequate washing and cleaning facilities shall also be provided on site. • For off-site disposal, the basic requirements and procedures specified under paragraph 4.2.1 of Chapter 4 of the PAH shall be followed. Marine Fill Committee (MFC) of CEDD is managing the disposal facilities in Hong Kong for the dredged sediment, while EPD is the authority of issuing marine dumping permit under the Dumping at Sea Ordinance (DASO). • For the purpose of site allocation and application of marine dumping permit and if considered necessary by EPD (Marine Dumping Control Section / Territorial Control Office), separate Sediment Sampling and Testing Plan(s) (SSTP) (including the possible additional sampling works for the EPP construction and within the sampling grid of MEB17) shall be submitted to EPD for agreement under DASO. Additional GI works, based on the SSTP, shall then be carried out in order to confirm the disposal arrangements of the dredged sediment. Sediment Quality Report(s) (SQR), reporting the chemical and biological screening results and the estimated quantities of sediment under different disposal options, shall then be submitted to EPD for agreement under DASO. • To ensure disposal space is allocated for the Project, the Project Proponent should be responsible for obtaining agreement from MFC on the rationale for sediment removal and the allocation of the disposal site. The contractor(s), on the other hand, should be responsible for the application of the marine dumping permit under DASO from EPD for the sediment disposal.

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				• The removed sediments are expected to be loaded onto the barge and transported to the designated disposal sites allocated by MFC. The removed sediment would be disposed of according to its determined disposal options and paragraph 4.2.1 of Chapter 4 of the PAH. • Stockpiling of contaminated sediments should be avoided. If temporary stockpiling of contaminated sediments is necessary, the removed sediment should be covered by tarpaulin and the area should be placed within earth bunds or sand bags to prevent leachate from entering the ground, nearby drains and surrounding water bodies. The stockpiles should be completely paved or covered by linings in order to avoid contamination to underlying soil or groundwater. Separate and clearly defined areas should be provided for stockpiling of contaminated and uncontaminated materials. Leachate, if any, should be collected and discharged according to the Water Pollution Control Ordinance (WPCO). • In order to minimise the potential odour / dust emissions during removal and transportation of the sediment, the removed sediments shall be wetted during removal / material handling and shall be properly covered when placed on trucks or barges. Loading of the removed sediment to the barge shall be controlled to avoid splashing and overflowing of the sediment slurry to the surrounding water. • The barge transporting the sediments to the designated disposal sites shall be equipped with tight fitting seals to prevent leakage and shall not be filled to a level that would cause overflow of materials or laden water during loading or transportation. In addition, monitoring of the barge loading shall be conducted to ensure that loss of material does not take place during transportation. To avoid illegal dumping, all dumping vessels have to be approved in a marine dumping permit issued under the DASO. Each of the vessels has to be installed with an automatic recording equipment, namely the Front End Mobile Unit (FEMU), which is a key component of the Real Time Tracking & Monitoring of Vessel (RTTMV) System of EPD. The FEMU transmits self-monitoring data direct from the barge at sea to the Control Centre at EPD through General Packet Radio Service (GPRS) mobile communication network. The transportation route avoiding the ecological sensitive areas should be proposed when applying the dumping permit. • Any floating refuse trapped within the Project area will be collected by the Contractor and disposed together with other general refuse. Apart from collecting and storing waste with good waste management practice on site to avoid having waste transported to water bodies under extreme weather conditions, the contractor should be responsible for the collection of refuse, if any, within the works area. Contractor shall collect and remove floating refuse at regular intervals on a daily basis to keep water bodies within the Project area and the neighbouring water free from rubbish during the construction phase. In case of floating refuse is identified, the floating materials should

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				be removed and eventually stored and disposed of together with the general refuse, after separating the recyclables for recycling. Ecology • Avoidance of direct impact on coral recipient sites within Junk Bay • Reduction of reclamation extent in TKO 132 comparing to the original scheme to minimise direct impact to intertidal and subtidal habitats • Confining reclamation extent in TKO 137 along artificial seawall • Pre-construction detailed coral survey shall be carried out to identify the location, condition number, and translocation feasibility of coral colonies within the affected subtidal habitats • Translocation of affected coral species shall be conducted if necessary • Mitigation measures suggested in other sections including noise and water quality can also minimise the indirect ecological impact (e.g. water quality impact on coral colonies) caused by the reclamations Fisheries • Avoidance of direct impact on sites of fisheries importance • Reduction of reclamation extent in TKO 132 comparing to the original scheme to minimise direct impact to fishing ground and habitat • Selection of marine construction methods with less water quality impact (i.e. DCM and jet grouting) have been adopted to minimise indirect impact on fisheries resources • Mitigation measures suggested in water quality section can also minimise the indirect fisheries impact caused by the reclamations Landscape and Visual Impact • During construction phase, mitigation measures recommended include preservation of existing vegetation, reinstatement of temporarily disturbed landscape areas, erection of decorative screen hoarding, preservation of natural coastline, and management of construction activities and facilities. • During operational phase, mitigation measures recommended include adaptation of eco-shoreline design. Cultural Heritage • Condition and structural survey should be carried out for Fat Tau Chau House Ruin SAI (SAI185) both before and after all construction works to inspect its physical condition and structural integrity. Based on the pre-construction condition and structural survey results and construction details, a baseline vibration review shall be conducted before the construction phase to evaluate if

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				monitoring of ground-borne vibration, tilting and ground settlement is required for Fat Tau Chau House Ruin SAI during the construction phase. The baseline vibration review should be submitted to AMO for comment and agreement before implementation. If affirmative, monitoring of ground-borne vibration, tilting and ground settlement should be conducted during the construction phase. Should the monitoring data be approaching to the vibration limit, the contractor shall propose measures to mitigate movement situation at the heritage site for consideration by AMO and implement on site. • Air Pollution Control (Construction Dust) Regulation shall be followed for Fat Tau Chau House Ruin SAI (SAI185). Dust suppression measures and good site practice should be observed for Fat Tau Chau House Ruin SAI (SAI185). • The areas with data gaps and the uninvestigated anomaly should be designated as archaeological exclusion zones (AEZs) during the marine works of the Project to ensure no impact on the seabed in these locations from anchoring of work vessels. • If antiquities or supposed antiquities under the Antiquities and Monuments Ordinance (Cap. 53) are discovered during the construction works within the Project boundary of TKO 137 and TKO 132, the project proponent is required to inform AMO immediately for discussion of appropriate mitigation measures to be agreed by AMO before implementation by the project proponent to the satisfaction of AMO. EM&A Requirements • EM&A personnel (including Environmental Team (ET) and Independent Environmental Checker (IEC)) shall be employed before commencement of construction of the project and EM&A Manual shall be updated to include the latest EM&A requirements in accordance with the information and recommendations in the EM&A Manual and by taking into account any specific site conditions.

Table C Project Scope and Key Mitigation Measures for DP3

Title of Designated Project	Nature of Designated Project	Location of Designated Project	Scale and Scope of Works	Key Mitigation Measures
Construction and Operation of Effluent Polishing Plant at TKO 137	(i) Sewage treatment works with an installed capacity of more than 15,000m^3 per day (ii) Sewage treatment works with an installed capacity of more than 5,000m^3 per day; and a boundary of which is less than 200m from the nearest boundary of an existing or planned residential area and educational institution	The location of the Project is shown in Figure C.	An effluent polishing plant will be built at TKO 137 to support the population of TKO 137. The treatment capacity of the EPP is proposed to be at 54,000 m3 per day	Air Quality • Dust suppression measures stipulated in Air Pollution Control (Construction Dust) Regulation and good site practices should be carried out to further minimise construction dust impact. • Provision of deodorizing units with odour removal efficiency of 95% for the effluent polishing plant. Noise Impact • Use of quieter construction method • Use of quality PME • Careful schedule of use of PME among nearby construction work site • Grouping of PME • Use of movable noise barriers and full enclosure. • Enclosing the fixed plant within reinforced concrete building or acoustic enclosure with openings directed away from NSRs • Use of quieter fixed plant • Use of silencer • Installation of acoustic louvre • Installation of noise barrier • Installation of noise enclosure • Installation of high speed roller shutter doors at openings • Submission of Construction Noise Management Plans • Submission of Fixed Noise Source Management Plans Water Quality / Sewage and Sewerage Treatment • Precautionary design measures to prevent emergency discharges during operation. • Emergency Contingency Plan to deal with power or treatment failure. Waste Management • Preparation of a Waste Management Plan in accordance with the ETWB TCW No. 19/2005 Environmental Management on Construction Sites and submitted it to the Engineer for approval. • Segregate and store different types of waste in different containers, skips or stockpiles to enhance reuse or recycling of materials and their proper disposal. • Stockpiling area should be provided with covers and water spraying system to prevent materials from being wind-blown or washed away. • Waste hauler with appropriate permits should be employed by the Contractor for the collection and transportation of waste from works areas to respective disposal outlets.

Title of Designated Project	Nature of Designated Project	Location of Designated Project	Scale and Scope of Works	Key Mitigation Measures
				• 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. 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 also be installed at the vehicular entrance and exit of the site to monitor handling of C&D materials disposal. To prohibit illegal dumping and landfilling of C&D materials, the dump trucks engaged on site should be equipped with GPS or equivalent automatic system for real time tracking and monitoring of their travel routings, parking locations and disposal activities. • The sediment should be excavated, handled, transported and disposed of in a manner that would minimise adverse environmental impacts. Excavated Category L sediment is proposed to be treated using cement stabilization / solidification (S/S) technique and reused as backfilling materials within reclamation area or by other concurrent projects before considering the marine disposal option. Possibility of reusing the excavated sediment will be subject to further review during the detailed design and construction stages. • Requirements of the Air Pollution Control (Construction Dust) Regulation, where relevant, shall be adhered to during excavation, transportation and disposal of the sediment. • In order to minimize the exposure to contaminated materials, workers shall, if necessary, wear appropriate personal protective equipment (PPE) when handling contaminated sediment. Adequate washing and cleaning facilities shall also be provided on site. • For off-site disposal, the basic requirements and procedures specified under paragraph 4.2.1 of Chapter 4 of the PAH shall be followed. Marine Fill Committee (MFC) of CEDD is managing the disposal facilities in Hong Kong for the excavated sediment, while EPD is the authority of issuing marine dumping permit under the Dumping at Sea Ordinance (DASO). • For the purpose of site allocation and application of marine dumping permit and if considered necessary by EPD (Marine Dumping Control Section / Territorial Control Office), separate Sediment Sampling and Testing Plan(s) (SSTP) (including the possible additional sampling works for the EPP construction) shall be submitted to EPD for agreement under DASO. Additional GI works, based on the SSTP, shall then be carried out in order to confirm the disposal arrangements of the excavated sediment. Sediment Quality Report(s) (SQR), reporting the chemical and biological screening results and the estimated quantities of sediment under different disposal options, shall then be submitted to EPD for agreement under DASO. • To ensure disposal space is allocated for the Project, the Project Proponent should be responsible for obtaining agreement from MFC on the rationale for sediment excavation and the allocation of

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				the disposal site. The contractor(s), on the other hand, should be responsible for the application of the marine dumping permit under DASO from EPD for the sediment disposal. • The excavated sediments are expected to be loaded onto the barge and transported to the designated disposal sites allocated by MFC. The excavated sediment would be disposed of according to its determined disposal options and paragraph 4.2.1 of Chapter 4 of the PAH. • Stockpiling of contaminated sediments should be avoided. If temporary stockpiling of contaminated sediments is necessary, the excavated sediment should be covered by tarpaulin and the area should be placed within earth bunds or sand bags to prevent leachate from entering the ground, nearby drains and surrounding water bodies. The stockpiles should be completely paved or covered by linings in order to avoid contamination to underlying soil or groundwater. Separate and clearly defined areas should be provided for stockpiling of contaminated and uncontaminated materials. Leachate, if any, should be collected and discharged according to the Water Pollution Control Ordinance (WPCO). • In order to minimise the potential odour / dust emissions during excavation and transportation of the sediment, the excavated sediments shall be wetted during excavation / material handling and shall be properly covered when placed on trucks or barges. Loading of the excavated sediment to the barge shall be controlled to avoid splashing and overflowing of the sediment slurry to the surrounding water. • The barge transporting the sediments to the designated disposal sites shall be equipped with tight fitting seals to prevent leakage and shall not be filled to a level that would cause overflow of materials or laden water during loading or transportation. In addition, monitoring of the barge loading shall be conducted to ensure that loss of material does not take place during transportation. To avoid illegal dumping, all dumping vessels have to be approved in a marine dumping permit issued under the DASO. Each of the vessels has to be installed with an automatic recording equipment, namely the Front End Mobile Unit (FEMU), which is a key component of the Real Time Tracking & Monitoring of Vessel (RTTMV) System of EPD. The FEMU transmits self-monitoring data direct from the barge at sea to the Control Centre at EPD through General Packet Radio Service (GPRS) mobile communication network. The transportation route avoiding the ecological sensitive areas should be proposed when applying the dumping permit. • Screenings and grits generated from the EPP is suggested to be disposed of at the NENT or WENT Landfill whereas the dewatered sludge generated from the EPP is suggested to be treated at the STF. The screenings, grits and dewatered sludge will be delivered by road transport in water tight containers or skips to avoid odour emission during transportation. Unloading process

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				will be operated in the designated room inside STF which should be enclosed and served by negative pressure by extracting odorous gas to deodorizing unit. Ecology • Avoidance of direct impact on Site of Conservation Importance (i.e. Clear Water Bay Country Park) • Mitigation measures suggested in other sections including air, noise and water quality can also minimise the indirect ecological impact to nearby natural habitats, including those within Country Park Fisheries • Mitigation measures suggested in water quality section can also minimise the indirect fisheries impact caused by the construction and operation of the Effluent Polishing Plant at TKO 137 Cultural Heritage • If antiquities or supposed antiquities under the Antiquities and Monuments Ordinance (Cap. 53) are discovered during the construction works within the Project boundary of TKO 137 and TKO 132, the project proponent is required to inform AMO immediately for discussion of appropriate mitigation measures to be agreed by AMO before implementation by the project proponent to the satisfaction of AMO. Landfill Gas Hazard • A detailed landfill gas hazard assessment (LFGHA) following the Landfill Gas Hazard Assessment Guidance Note issued by EPD should be conducted at detailed design stage to re-confirm the landfill gas hazard risk and undertake detailed design of the mitigation measures, as appropriate. Landscape and Visual Impact • During construction phase, mitigation measures recommended include preservation of existing vegetation, reinstatement of temporarily disturbed landscape areas, erection of decorative screen hoarding and management of construction activities and facilities. • During operational phase, mitigation measures recommended include aesthetically pleasing design of aboveground structures, provision of buffer screen planning, roof greening, compensatory tree planting, landscape treatments on slope or retaining structure. EM&A Requirements • EM&A personnel (including Environmental Team (ET) and Independent Environmental Checker (IEC)) shall be employed before commencement of construction of the project and EM&A Manual

Title of Designated Project	Nature of Designated Project	Location of Designated Project	Scale and Scope of Works	Key Mitigation Measures
				shall be updated to include the latest EM&A requirements in accordance with the information and recommendations in the EM&A Manual and by taking into account any specific site conditions.