

Appendix 17.2 - Summary of Environmental Impacts

Sensitive Receivers / Assessment Points	Impact Prediction Results (Without Mitigation)	Key Relevant Standards/Criteria	Extents of Exceedance (Without Mitigation)	Impact Avoidance Measures/Mitigation Measures	Residual Impacts (After Implementation of Mitigation Measures)
Air Quality Impact					
Construction Phase					
Existing and planned ASRs within the 500m assessment area	Based on former dust monitoring data of HSR which has similar nature and scale of the Project, it would be anticipated that no significant dust impact would arise from the construction of the Project.	Annexes 4 and 12 of EIAO-TM 1-hr average TSP Conc: 500 µg/m³ AQOs (effective on 1 Jan 2022) 24-hr Average FSP Conc: 50 µg/m³ (Number of exceedance allowed: 35) Annual Average FSP Conc: 25 µg/m³ 24-hr Average RSP Conc: 100 µg/m³ (Number of exceedance allowed: 9) Annual Average RSP Conc: 50 µg/m³	N/A	 Regular watering on heavy construction work areas to reduce dust emission Regular watering at the unloading point of spoils generated by the TBM excavation, and at spoiling handing and unpaved / paved haul roads Provision of 2.4m/3m high hoarding from ground level along site boundary where appropriate Install blast door at the opening to avoid the escape of fugitive dust from blasting. The blast door should remain closed, and ventilation should be stopped during blasting. Water spaying should be applied to facilitate dust settlement before opening of blast door Provide a filtration system with watering and dust collector with overall dust removal efficiency of at least 80% at the ventilation exhaust for the tunneling works by drill-and-blast to treat dust-laden exhaust before release to the ambient Carry out dust suppression 	No adverse residual impacts are anticipated



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				measures stipulated in the Air Pollution Control (Construction Dust) Regulation and good site practices to further minimise construction dust impact • Connect construction plant and equipment to main electricity supply and avoid use of diesel generators and diesel-powered equipment, avoid the use of exempted NRMMs and deploy electrified NRMMs as far as practicable to minimise exhaust emission from NRMMs during construction phase	
Airborne Noise Impa	nct				
Construction Phase					
Existing and planned NSRs within the 300m assessment area	60 – 91 dB(A)	Annexes 5 and 13 of EIAO-TM • Leq _(30 min) 75dB(A) at 1m the façade of domestic premises, hotels and hostels • Leq _(30 min) 70dB(A) at 1m from the façade of educational institution • Leq _(30 min) 65dB(A) at 1m from the façade of educational	The exceedances of noise criteria would range from 1 to 16 dB(A) for residential premises, and 17 dB(A) and 22 dB(A) during normal period and examination period for school respectively.	 Adopt quieter construction methods Adopt good site practices and noise management techniques to limit noise emissions at source Use quiet construction method or powered mechanical equipment (PME) and quality powered mechanical equipment (QPME) Use quiet plant where appropriate, with reference to the PME listed in the GW-TM, the Quality Powered Mechanical Equipment (QPME)/ other commonly used PME listed 	No residual construction noise impact is predicted with incorporation of mitigation measures



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		institution during examination		in EPD web pages or PME specification published by equipment manufacturer	
				Use temporary movable noise barrier, noise enclosure, noise insulating fabric, silencer, soundproof hammer bracket, etc., to screen noise from PMEs	
				Install temporary noise barrier along the PWA works site boundary	
				Avoid conducting construction activities during restricted hours as far as practicable	
				Prepare Construction Noise Management Plan(s) (CNMP(s)) before the issue of tender and the commencement of construction works, subject to the contract arrangement of the Project and agreement with EPD, to verify the plant inventory and assess the effectiveness and practicality of the proposed mitigation measures. The CNMP(s) should be certified by Certified Noise Modelling Professional of Hong Kong Institute of Qualified Environmental Professionals (HKIQEP) or equivalent.	
				Review the construction programme and the necessity for adopting noisy PMEs before construction commencement by	



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				Contractor Liaise with the representative of the planned education institution predicted with exceedance and/or the Examination Authority to confirm the examination periods and to avoid conducting noisy activities during the examination periods if the school is relied on opened windows for ventilation	
Operational Phase (I Existing and planned NSRs within the 300m assessment area	No exceedance was predicted	EIAO-TM Annex 5 ANL-5dB(A) / prevailing background for planned noise sources NCO IND-TM	No exceedance was predicted	Prepare Fixed Noise Sources Management Plan(s) (FNMP(s)) before the issue of tender and before commencement of the installation of fixed plant, subject to the contract arrangement of the Project and agreement with EPD. The FNMP(s) should be certified by Certified Noise Modelling Professional of HKIQEP or equivalent. Select proper quiet plant aiming to reduce the tonality at NSRs Adopt acoustic treatment e.g. acoustic louvers and noise enclosures, installation of silencer for the exhaust of ventilation system, where necessary.	No residual fixed plant noise impact is predicted No adverse cumulative fixed noise impact is expected



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				Prepare Fixed Noise Audit Report(s) to demonstrate the compliance of the fixed plant noise sources of the Project before commencement of operation of the Project	
Operational Phase (F	Rail Noise)	,			
Existing and planned NSRs within the 300m assessment area near the short trough section at the tunnel portal connecting to NTD	N/A	EIAO-TM Annex 5 Table 2 of IND-TM	N/A	N/A	N/A
Ground-borne Noise	Impact				
Construction Phase					
Existing and planned NSRs within the 300m assessment area	PME-induced Leq(30min) 51 - 63 dB(A) TBM-induced Leq(30min) 46 - 64 dB(A)	EIAO-TM NCO	PME-induced No exceedance was predicted TBM-induced Exceedance of up to 5 dB(A) was predicted at a planned school during examination period	Close liaison with the representative of the education institution predicted with exceedance to confirm the examination periods and to avoid TBM operation in the vicinity of the school within such periods	No residual impact anticipated
Operational Phase					
Existing and planned NSRs within the	Day/Evening Time	• EIAO-TM	No exceedance was	Review the need of mitigation measures based on the findings	No residual impact is



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300m assessment area	<20 – 47 dB(A) Night-time <20 – 33 dB(A)	• IND-TM	predicted	of tunnel impact test to be conducted after the completion of tunnel construction	 anticipated No adverse cumulative ground-borne noise impact is expected
Water Quality Impac	t				
Construction Phase					
Water sensitive receivers within the 500m assessment area	Wastewater and surface runoff/effluent generated may contain concrete slurry, grouting materials and contaminated soils, etc., that would increase SS levels, turbidity and pH in nearby WSRs, causing water pollution Windblown dust by exposed soil surfaces may fall directly onto the nearby WSRs, increasing the SS levels Potential groundwater infiltration and drawdown and change in groundwater level Disturbed contaminated material, if any, may be washed with site runoff into WSRs, affecting the water environment Accidental spillage of	Annexes 6 and 14 of the EIAO-TM Water Quality Objectives for Deep Bay Water Control Zone (WCZ) Technical Memorandum on Effluents Discharge Standards (DSS-TM) Professional Persons Environmental Consultative Committee Practice Note 1/94 Construction Site Drainage (ProPECC PN 1/94) Professional Persons Environmental Consultative Committee Drainage (ProPECC PN 1/94) Professional Persons Environmental Consultative	N/A	Implement the best management practices as specified in the ProPECC PN 1/94 Discharge surface runoff from construction sites into storm drains via adequately designed sand/silt removal facilities such as sand traps, silt traps and sedimentation basins Provide channels or earth bunds or sand bag barriers to properly direct stormwater to silt removal facilities, and perimeter channels at site boundaries where necessary to intercept storm runoff from outside to the site Regular maintenance of silt removal facilities, channels and manholes and regular removal of deposited silt and grit Programme construction works to minimize soil excavation	No unacceptable residual impact is predicted



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	chemicals may result in increasing hydrocarbon levels in the nearby WSRs	Committee Practice Note 5/93 Drainage Plans subject to Comment by the Environmental Protection Department (ProPECC PN 5/93) Environment, Transport and Works Bureau Technical Circular No. 5/2005 HKPSG Requirement of No Net Increase in Pollution Load		 works in rainy seasons Cover temporary exposed slope surfaces, stockpile materials and manholes e.g. by tarpaulin, and protect temporary access roads crushed stone or gravel Provide intercepting channels to prevent storm runoff Compact earthworks final surfaces and carry out subsequent permanent work or surface protection immediately Recondition and reuse of bentonite slurries, if required Adopt good site practices House and cover any excavated contaminated material and exposed contaminated surface Install groundwater recharging wells for recharging the contaminated groundwater back into the ground 	
Operational Phase					
Water sensitive receivers within the 500m assessment area	Sewage effluent from staff and passengers, and wastewater effluent discharge, and surface runoff from newly paved areas may contain contaminants and increase SS levels, turbidity and pH in nearby	 Annexes 6 and 14 of the EIAO-TM Water Quality Objectives for Deep Bay Water Control Zone (WCZ) Technical Memorandum on 	N/A	 Properly collect and divert sewage and wastewater effluents Follow best management practices for stormwater discharge Avoid exposed surface by hard paving or covering landscaping 	No unacceptable residual impact is predicted



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	WSRs, causing water pollution	Effluents Discharge Standards Professional Persons Environmental Consultative Committee Practice Note 1/94 Construction Site Drainage Professional Persons Environmental Consultative Committee Practice Note 5/93 Drainage Plans subject to Comment by the Environmental Protection Department (ProPECC PN 5/93) Environment, Transport and Works Bureau Technical Circular No. 5/2005 HKPSG Requirement of No Net Increase in Pollution Load		area and plantation where appropriate	
Sewerage and Sewa	ge Treatment Implications				
Existing and planned sewerage systems	Given both existing and planned public sewerage	Annexes 6 and 14 of the EIAO-TM	N/A	No mitigation measures are proposed. Nevertheless, the following	No unacceptable adverse impact is



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within the 500m assessment area	systems will have sufficient capacities to handle the existing and planned sewage loads, no unacceptable adverse impact is anticipated	Water Pollution Control Ordinance Sewerage Manual Part 1 and Part 2 (DSD) Report No.: EPD/TP 1/05 Guidelines for Estimating Sewage Flows for Sewage Infrastructure Planning Version 1.0 (EPD)		is recommended: Liaison with concurrent projects in the vicinity for the proper arrangement of sewerage interfaces	expected
Waste Management	Implications				
Construction Phase					
On-site construction workers	 Around 125,250 m³ of non-inert C&D materials and 4,273,650 m³ of inert C&D materials will be generated from excavation, demolition works, site formation, and construction of railway facilities and stations Around 509,220 m³ of imported fill will be required Few hundred litres per month of chemical waste will be generated from plant maintenance and operation of equipment and machineries 	 Annexes 7 and 15 of the EIAO-TM Waste Disposal Ordinance (Cap. 354) Waste Disposal (Chemical Waste) (General) Regulation (Cap. 354C) Waste Disposal (Charges for Disposal of Construction Waste) Regulation (Cap. 354N) Land (Miscellaneous Provisions) 	N/A	Implementation of good site practices and waste reduction measures	No unacceptable residual impact is predicted



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	 Around 31,990 kg per day of total general refuse will be generated for works sites/ areas at peak time Around 64,530 m³ of excavated land-based sediment will be generated 	Ordinance (Cap. 28) Public Health and Municipal Services Ordinance (Cap. 132) — Public Cleansing and Prevention of Nuisances Regulation Dumping at Sea Ordinance (Cap. 466) Practice Notes for Authorized Persons, Registered Structural Engineers and Registered Geotechnical Engineers No. 252 ADV-21 — Management Framework for Disposal of Dredged/Excavated Sediment			
Operational Phase					
Future passengers, staff commercial operators and occupants	 Around 2,301 kg of general refuse will be generated daily from future passengers, staff and commercial operators A few hundred litres per month of chemical waste 	 Annex 7 and 15 of the EIAO-TM Waste Disposal Ordinance (Cap. 354) Waste Disposal (Chemical Waste) 	N/A	Implementation of good site practices and waste reduction measures	No unacceptable residual impact is predicted



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	will be generated	(General) Regulation (Cap. 354C) Public Health and Municipal Services Ordinance (Cap. 132BK) – Public Cleansing and Prevention of Nuisances Regulation			
Land Contamination					
On-site construction workers and future occupants	Potential health risk to the onsite workers and future occupants would arise from direct contact of potentially contaminated materials	 Annex 19 of the EIAO-TM, Guidelines for Assessment of Impact on Sites of Cultural Heritage and Other Impacts (Section 3: Potential Contaminated Land Issues) Guidance Notes for Contaminated Land Assessment and Remediation Guidance Manual for Use of Risk-Based Remediation Goals (RBRGs) for Contaminated Land Management Practice Guide for Investigation and 	N/A	Re-appraisal and submit supplementary Contamination Assessment Plan(s) (CAPs) as necessary Submit Contamination Assessment Report (CAR), Remediation Action Plan (RAP) and Remediation Report (RR) if construction works are to be carried out on identified contaminated areas Implement package of remediation methods based on the findings of SI	No unacceptable residual impact is predicted.



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		Remediation of Contaminated Land			
Terrestrial and Aqua	tic Ecology				
Construction Phase					
Recognized sites of conservation importance, ecological sensitive areas, species of conservation importance within 500m assessment area	Bird collision Disturbance impact on recognized sites of conservation importance and ecologically sensitive areas, terrestrial habitats, and vegetation and fauna Habitat fragmentation Disturbances and obstruction to breeding / roosting ardeid flight paths Impacts on water quality and hydrology of modified watercourse Potential hydrogeological disruptions due to groundwater drawdown Ground-borne noise impact and vibration from underground tunnelling construction works Loss of about 1 ha of wetland habitat with moderate ecological value Direct loss of a bat day-	Annexes 8 and 16 of the EIAO-TM and the EIAO Guidance Notes (No. 3/2010, 6/2010, 7/2010, and 10/2010) Forests and Countryside Ordinance (Cap. 96) Wild Animals Protection Ordinance (Cap. 170) Country Parks Ordinance (Cap. 208) Protection of Endangered Species of Animals and Plants Ordinance (Cap. 586) Town Planning Ordinance (Cap. 131) Water Pollution Control Ordinance (Cap. 358)	N/A	Avoidance Avoidance of recognized sites of conservation importance and core areas of ecologically sensitive areas as discussed in Section 2 Minimisation Optimization of project footprint Reduce the number of EAPs, EEPs and VBs and minimise the encroachment into ecological resources in early design stage Carry out a detailed Vegetation Survey to identify any other potentially affected plant species of conservation importance and to ascertain the presence, update their conditions and determine the abundance and locations prior to the commencement of any site clearance works. A Protection and Transplantation Proposal including the subsequent monitoring for the affected individuals should be prepared and submitted to EPD for approval. Other mitigation measures should be considered	No unacceptable residual impact anticipated



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	roost in one of the structures in the deserted Pok Wai Public School and potential direct injury and mortality of the roosting bats, if any, during daytime	Chapter 10 of HKPSG		in case plant preservation or transplantation is not practical. Avoidance of direct injury / mortality of roosting bats Careful scheduling of demolition of Pok Wai Public School Conduct bat inspection to ensure no bat is roosting in the structure before the commencement of demolition of the existing structure Install bat exclusion devices Minimisation of disturbances Noise reduction measures: Effective placing of temporary noise barriers where practicable as screening, noise enclosure for relatively fixed plant source Shut down of machines and plants that are in intermittent use, and the use of quiet PME to limit noise emissions at source (refer to Airborne Noise Impact Section above for details) Erection of non-transparent and dull green color of site hoarding of about 3m high around the works site/areas of SMA located adjacent to wetland with bird usage Glare reduction measures: Restriction of construction hours Provision of hoarding Night-time lighting control	



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				 Avoidance of directional lightings to the adjoining habitats and roosts Dust suppression measures: Regular watering on heavy construction works areas and at the unloading point of spoils generated by the TBM excavation Install blast door at the opening of tunnelling works by drill-and-blast Proper storage of construction materials Establishment of buffer zone, phasing works and control of working hours Establishment of buffer zone of 100m from Kam Po Road Egretry and Ardeid Night Roost Scheduling of noisy construction works using PME within the buffer zone outside breeding seasons Noisy construction works should be ceased 30mins before sunset Avoidance of bird collision Provision of hoardings with opaque and dull color, nontransparent panels as noise enclosures 	
				importance	



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				 Preservation in-situ or transplantation to nearby suitable habitats of unavoidably affected flora individuals of conservation importance Consideration of compensation by seedling planting Control of construction runoff The same as those recommended in Water Quality section Minimization of groundwater infiltration Probing ahead to confirm any excessive water inflow Reduction of water inflow by pregrouting if necessary Installation of waterproof lining after the formation of tunnels Installation of recharge wells Post-grouting if necessary Momination of approved personnel 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, 	Measures)



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				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 minimize windblown litter and dust during transportation of waste 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 Preparation of Waste Management Plan (WMP), as part of the Environmental Management Plan (EMP) Compensation Wetland compensation Compensation of about 1 ha wetland Provision of bat shelter Provision of a bat shelter with reference to the environmental characteristics of the classroom in Pok Wai Public School	



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Recognized sites of conservation importance, ecological sensitive areas, species of conservation importance within 500m assessment area	 Direct injury / mortality to wildlife and bird collision Disturbance to habitats, sites of conservation importance and ecologically sensitive areas, adjacent habitats and associated wildlife Disturbance to breeding / roosting ardeids and obstruction to their flight paths Change in hydrodynamics properties and hydrology of wetland habitats 	 Annexes 8 and 16 of the EIAO-TM and the EIAO Guidance Notes (No. 3/2010, 6/2010, 7/2010, and 10/2010) Forests and Countryside Ordinance (Cap. 96) Wild Animals Protection Ordinance (Cap. 170) Country Parks Ordinance (Cap. 208) Protection of Endangered Species of Animals and Plants Ordinance (Cap. 586) Town Planning Ordinance (Cap. 131) Water Pollution Control Ordinance (Cap. 358) Chapter 10 of HKPSG 	N/A	 Glare reduction measures Night-time lighting control Avoidance of directional lightings to the adjoining habitats and roosts Avoidance of bird collision Adoption of non-glaring tinted materials Avoidance of tall landscape plants in green roof system above stations Avoidance of window walls or reflective materials Coating all glass panels with anti-bird-collision film superimposing dark patterns around 5cm apart/one-way transparent film Avoidance of dense tree or shrub stands near glass panels Wetland compensation Compensation of about 1 ha wetland Provision of bat shelter Provision of a bat shelter with reference to the environmental characteristics of the classroom in Pok Wai Public School 	No unacceptable residual impact anticipated
Fisheries					
Construction Phase					



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Fishpond culture resources and activities and watercourses serving as water sources for fishpond areas within the 500m assessment area	Loss of fishponds Active fishponds Short-term loss (0.71 ha) Inactive fishponds Short-term loss (0.23 ha) Abandoned fishponds Long-term (0.13 ha) and short-term loss (0.61 ha) Indirect impacts Construction works and construction runoff Water quality deterioration Accidental spillage and potential contamination of surface water and groundwater Draw-down of water table, disruption or disturbance of pond culture related activities Potential vibration and construction noise impact	Annexes 9 and 17 of the EIAO-TM Fisheries Protection Ordinance (Cap. 171) Marine Fish Culture Ordinance (Cap. 353) Water Pollution Control Ordinance (Cap. 358)	N/A	Avoidance of potential water quality impact Mitigation measures would be the same as those recommended in Section 6 Minimization Control of site runoff Ground-borne noise mitigation measures would be the same as those recommended in Section 5 Minimization of the chance of accidental spillage and potential contamination of surface water and groundwater Adoption of good site practices	No unacceptable residual impact anticipated
Operational Phase				l	
Fishpond culture resources and activities and watercourses serving as water	Potential vibration impact from train operation in underground tunnels	Annexes 9 and 17 of the EIAO-TM Fisheries Protection Ordinance (Cap.	N/A	Ground-borne noise levels predicted at existing residential receivers were well below the statutory criteria, no adverse impact is anticipated	No adverse residual impact anticipated



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sources for fishpond areas within the 500m assessment area		 Marine Fish Culture Ordinance (Cap. 353) Water Pollution Control Ordinance (Cap. 358) 			
Landscape and Visu	al Impact				
Construction Phase					
Existing Landscape Resources (LRs), Landscape Character Areas (LCAs) within the 500m assessment area and Visually Sensitive Receivers (VSRs) within the visual envelope	 Sources of impact including construction works of the stations and ABs, temporary works and night-time lighting Moderate adverse impacts on LCA1 and LCA3 Slight adverse impacts on LCA 2 and LCA4 No significant impacts on LCA 5 	Annexes 10 and 18 of the EIAO-TM Environmental Impact Assessment Ordinance Guidance Note No. 8/2010; Town Planning Ordinance (Cap. 131) Protection of Endangered Species of Animals and	N/A	CM1 – Tree without impact from the proposed works should be retained and any existing trees unavoidably affected by the works should be transplanted as far as possible in accordance with LAO Practice Note 6/2023. CM2 - Control of night-time lighting glare to prevent light overspill to the nearby VSRs and into the sky. Relevant best practices as suggested in the	 Moderate adverse impacts on LCA1 and LCA3 Slight adverse impacts on LCA2 and LCA4 No significant impacts on LCA5
Kam Sheung Road/ Pat Heung Area	 Moderate adverse impacts on LR 1.15 and LR1.18e Slight adverse impacts on LR1.9, LR1.14a and LR1.18d No significant impacts on the remaining LRs Slight adverse impacts 	Plants Ordinance (Cap. 586) HKPSG Chapters 4, 10 and 11 Charter on External Lighting Guideline on Industry Best Practices for External Lighting	N/A	"Charter on External Lighting" and "Guidelines on Industry Best Practices for External Lighting Installations" promulgated by ENB should be adopted. CM3 - Erection of decorative screen hoarding or hoarding	 Moderate adverse impacts on LR1.15 and LR1.18e Slight adverse impacts on LR 1.9, LR1.14a and LR 1.18d No significant impacts on the



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	on VSRs R4, R23, R24, RE2, RE6, T1 and I2 No significant impacts on VSRs R2, R3 and T2	Installations; AFCD Nature Conservation Practice Note No. 2 - Measurement of Diameter at Breast Height (DBH); AFCD Nature Conservation Practice Note No. 3 - The Use of Plant		compatible with the surrounding setting. CM4 - Construction facilities and activities on work sites and areas should be carefully managed and controlled on the height and disposition /arrangement to minimise any potential adverse landscape and visual impacts	 remaining LRs Slight adverse impacts on VSRs R4, R23, R24, RE2, RE6, T1 and I2 No significant impacts on VSRs R2, R3 and T2
Sha Po/ Au Tau Area	 Moderate adverse impacts on LR2.5, LR2.10 and LR2.18b Slight adverse impacts on LR2.9, LR2.13, LR2.14b, LR2.14c, LR2.14d and LR2.17 No significant impacts on the remaining LRs Moderate adverse impacts on VSR R5 Slight adverse impacts on VSRs GIC1, R6, R7 and R21 Insubstantial to slight adverse impacts on VSR T3 	 DEVB TC(W) No. 5/2020- Registration and Preservation of Old and Valuable Trees DEVB TC(W) No. 2/2012 - Allocation of Space for Quality Greening on Roads DEVB TC(W) No. 6/2015 - Maintenance of Vegetation and Hard Landscape Features LAO PN 6/2023 - Processing of Tree preservation and Removal Proposals for Building Development in Private Projects - Compliance with 	N/A	Visual impacts	 Moderate adverse impacts on LR2.5, LR2.10 and LR2.18b Slight adverse impacts on LR2.9, LR2.13, LR2.14b, LR2.14c, LR2.14d and LR2.17 No significant impacts on the remaining LRs Moderate adverse impacts on VSRs R5 Slight adverse impacts on VSRs GIC1, R6, R7 and R21 Insubstantial to



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Ngau Tam Mei/ Pok Wai Area	Substantial adverse impacts on LR3.13 Moderate adverse impacts on LR3.2 Slight adverse impacts on LR3.3, LR3.4 LR3.6, LR3.8, LR3.10 and LR3.14 No significant impacts on the remaining LRs Moderate adverse impacts on VSR I4 Slight adverse impacts on VSRs R8, R11 and RE1 No significant impacts on VSRs R9 and R10	Tree Preservation Clause under Lease DEVB TC(W) No. 9/2020 Blue-Green Drainage Infrastructure Guidelines on Tree Transplanting (September 2014) issued by Greening, Landscape and Tree Management (GLTM) Section of DevB Guidelines on Tree Preservation during Development (April 2015) issued by GLTM Section of DevB Study on Landscape Value Mapping of Hong Kong	N/A		slight adverse impacts on VSR T3 Substantial adverse impacts on LR3.13 Moderate adverse impacts on LR3.2 Slight adverse impacts on LR3.3, LR3.4 LR3.6, LR3.8, LR3.10, LR3.13 and LR3.14 No significant impacts on the remaining LRs Moderate adverse impacts on VSR I4 Slight adverse impacts on VSR R8, R11 and RE1 No significant impacts on VSRs R8, R11 and RE1 No significant impacts on VSRs R9 and R10
San Tin/ Shek Wu Wai Area	Substantial adverse impacts on LR4.13		N/A		Substantial adverse impacts



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	 Moderate adverse impacts on LR4.2, LR4.5 and LR4.8 Slight adverse impacts on LR4.3a, LR4.4, LR4.6, LR4.10, LR4.16 				 on LR4.13 Moderate adverse impacts on LR4.2, LR4.5 and LR4.8 Slight adverse
	 and LR4.17 No significant impacts on the remaining LRs Slight adverse impacts on VSRs RE3, RE5 and 				impacts on LR4.3a, LR4.4, LR4.6, LR4.10, LR4.16 and LR4.17
	R13				 No significant impacts on the remaining LRs Slight adverse impacts on VSRs RE3, RE5 and R13
Kwu Tung/ Chau Tau Area	 Moderate adverse impacts on LR5.2 and LR5.10 Slight adverse impacts 		N/A		Moderate adverse impacts on LR5.2 and LR5.10
	LR5.4, LR5.6, LR5.11, LR5.13, LR5.18b and LR5.18c No significant impacts on the remaining LRs				Slight adverse impacts on LR5.4, LR5.6, LR5.11, LR5.13, LR5.18b and
	No significant impacts on VSRs R17, R19 and T4				LR5.18cNo significant impacts on the remaining LRs
					 No significant impacts on



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Tai Shu Ha Area	 Slight adverse impacts on LR6.1 No significant impacts on the remaining LRs No significant impacts on VSRs T5 and RE7 		N/A		VSRs R17, R19 and T4 Slight adverse impacts on LR6.1 No significant impacts on the remaining LRs. No significant impacts on VSRs T5 and RE7
Operational Phase Existing Landscape Resources (LRs) and Landscape Character Areas (LCAs) within the 500m assessment area and Visually Sensitive Receivers (VSRs) within the visual envelope	 Sources of impact include operation of the Stations with associated facilities as well as the ABs. Existing vegetation affected by works would be affected permanently Moderate adverse impacts on LCA1 and LCA3 Slight adverse impacts on LCA2 and LCA4 No significant impacts on the remaining LCA 5 	Annexes 10 and 18 of the EIAO-TM Environmental Impact Assessment Ordinance Guidance Note No. 8/2010; Town Planning Ordinance (Cap. 131) Protection of Endangered Species of Animals and Plants Ordinance (Cap. 586) HKPSG Chapters 4, 10 and 11 Charter on External	N/A	OM1 – Aesthetically pleasing design of aboveground structures as regard to the form, material and finishes should be incorporated to Stations, Entrance, Ancillary Buildings and other associated engineering facilities so as to blend in the structures to the adjacent landscape and visual context. OM2 – Buffer screen planting, including shrub to provide screening to ventilation building, engineering structures and associated facilities.	Slight adverse impacts on LCA1 Insubstantial impacts on remaining LCAs
Kam Sheung Road/	• Moderate adverse	Lighting	N/A		Slight adverse



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Sha Po/ Au Tau Area	 impacts on LR1.15 and LR1.18e Slight adverse impacts on LR1.9, 1.14aand LR1.18d No significant impacts on the remaining LRs Slight adverse impacts on VSRs R4, R23, R24, RE2, RE6, T1 and I2 No significant impacts on VSRs R2, R3 and T2 Moderate adverse impacts on LR2.5, LR2.10 and LR2.18b Slight adverse impacts on LR2.9, LR2.13, LR2.14b, LR2.14c, LR2.14d and LR2.17 No significant impacts on the remaining LRs Moderate adverse impacts on VSR R5 Slight adverse impacts on VSR R5 Insubstantial to slight adverse impacts on VSR T3 	Guideline on Industry Best Practices for External Lighting Installations; AFCD Nature Conservation Practice Note No. 2 - Measurement of Diameter at Breast Height (DBH); AFCD Nature Conservation Practice Note No. 3 - The Use of Plant Names; DEVB TC(W) No. 5/2020- Registration and Preservation of Old and Valuable Trees DEVB TC(W) No. 2/2012 - Allocation of Space for Quality Greening on Roads DEVB TC(W) No. 6/2015 - Maintenance of Vegetation and Hard Landscape Features LAO PN 6/2023 -	N/A	 OM3 – Roof greening at the roof area of the proposed structures as far as practical to enhance the landscape quality of the structures and mitigate any potential visual impact on adjacent VSRs at high level. OM 4 – Compensatory tree planting in accordance with LAO Practice Note 6/2023 for compensation of felled trees OM 5 – Landscape treatments on slope or retaining structure should be made reference to GEO Publication No. 1/2011 – Technical Guidelines on Landscape Treatment for Slopes 	impacts on LR1.15 and LR1.18e Insubstantial impacts on remaining LRs and all VSRs Slight adverse impacts on LR2.10 and VSR R5 Insubstantial impacts on remaining LRs and VSRs
Ngau Tam Mei/ Pok Wai Area	Substantial adverse impacts on LR3.13	Processing of Tree preservation and	N/A		Moderate adverse impacts



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San Tin/ Shek Wu Wai Area	 Moderate adverse impacts on LR3.2 Slight adverse impacts on LR3.3, LR3.4 LR3.6, LR3.8, LR3.10 and LR3.14 No significant impacts on the remaining LRs Moderate adverse impacts on VSR I4 Slight adverse impacts on VSR R8, R11 and RE1 No significant impacts on VSR R9 and R10 Substantial adverse impacts on LR4.13 Moderate adverse impacts on LR4.8 Slight adverse impacts on LR4.6, LR4.6, LR4.10, LR4.16 and LR4.17 No significant impacts on the remaining LRs Slight adverse impacts on the remaining LRs Slight adverse impacts on VSR RE3, RE5 and R13 No significant impacts on VSR R26 and GIC2 	Removal Proposals for Building Development in Private Projects — Compliance with Tree Preservation Clause under Lease DEVB TC(W) No. 9/2020 Blue-Green Drainage Infrastructure Guidelines on Tree Transplanting (September 2014) issued by Greening, Landscape and Tree Management (GLTM) Section of DevB Guidelines on Tree Preservation during Development (April 2015) issued by GLTM Section of DevB Study on Landscape Value Mapping of Hong Kong	N/A		on LR3.13 Slight impact on VSR RE1 Insubstantial impacts on the remaining LRs and VSRs Moderate adverse impacts on LR4.13 Slight adverse impact on LR4.2 Insubstantial impacts on remaining LRs and all VSRs



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Kwu Tung/ Chau Tau Area	 Moderate adverse impacts on LR5.2 and LR5.10 Slight adverse impacts on LR5.4, LR5.6, LR5.10, LR5.11, LR5.13, LR5.18b and LR5.18c No significant impacts on the remaining LRs No significant impacts on VSRs R17, R19 R27, RE38, T4, I9 and GIC3 		N/A		Slight adverse impact on LR5.10 Insubstantial impacts on remaining LRs and all VSRs
Tai Shu Ha Area	 Slight adverse impacts on LR6.1 No significant impacts on the remaining LRs No significant impacts on VSRs T5 and RE7 		N/A		Insubstantial impacts on all LRs and VSRs
Cultural Heritage an	d Archaeological Impact				
Construction Phase				,	
Built heritage and archaeological resources within 500m assessment area	Demolition of two other identified items would be anticipated Indirect impacts including ground-borne vibration, tilting and settlement for the other identified item located above underground works sites	 Antiquities and Monuments Ordinance (A&MO) (Cap.53) Environmental Impact Assessment Ordinance (EIAO) (Cap.499) Annexes 10 and 19 of the EIAO-TM 	N/A	Preservation by means of cartographic and photographic record and other documentation means (including 3D scanning) for two other identified items with imminent direct impact anticipated Monitoring of ground-borne vibration, tilting and ground settlement with Alert, Alarm and	No adverse residual impact anticipated



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	Temporary change of access route Archaeology Direct impact to archaeological resources in Long Ha ASA, Ngau Tam Mei ASA and Mai Po Lung (South) ASA Archaeological potential of the remaining Project area is low/no, the impact to archaeology by the Project is considered acceptable	Chapter 10 of HKPSG Guidelines for Cultural Heritage Impact Assessment (GCHIA) CHIA)		Action (3As) System for the other identified item under Buildings Ordinance is recommended A safe access route should be maintained for the users of the other identified item Archaeology Survey-cum-excavation to be undertaken by archaeologist(s) within Long Ha ASA and Ngau Tam Mei ASA after land resumption and before commencement of site formation and construction works with scope, methodology and programme of the survey-cum-excavation to be agreed with AMO is recommended Further archaeological investigation should be conducted on NTM-TP3 after land resumption and before commencement of site formation and construction works to yield adequate archaeological information To ensure protection and preservation of any potential archaeological deposits that may exist within the Mai Po Lung (South) ASA, archaeological watching brief to be carried out by an archaeologist is recommended during the course of excavation works, and the	



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				details should be agreed with AMO • For the sake of satisfying licence requirements and provide a more comprehensive analysis on the archaeological potential within the Licence Area, future archaeological survey is recommended on the south of SAT Station after land resumption and before commencement of site formation and construction works • If antiquities or supposed antiquities under the Antiquities and Monuments Ordinance (Cap. 53) are discovered during the construction phase, 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	
Operational Phase Built heritage and archaeological resources within 500m assessment area	Built heritage No adverse impact is anticipated. Archaeology	Antiquities and Monuments Ordinance (A&MO) (Cap.53) Environmental Impact Assessment	N/A	N/A	No adverse residual impact anticipated



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	anticipated.	 (Cap.499) Annexes 10 and 19 of the EIAO-TM Chapter 10 of HKPSG Guidelines for Cultural Heritage Impact Assessment (GCHIA) 			
Hazard to Life					
Construction Phase					
Population within 100m influence zone along portals and openings, explosive storage in magazine site and the transportation routes	 Individual risk Within criteria of 1e-5/year Societal risk Cumulative frequency falls into ALARP region Potential loss of life (PLL) Use of explosives: 3.64e-6 (12.11%) Transport of explosives: 2.64e-5 (87.87%) Overnight storage of explosives: 7.23e-9 (0.02%) Cost-benefit analysis 	 Annex 4 of the EIAO-TM Dangerous Goods Ordinance (Cap. 295) 	N/A	Good practices for the use of explosives, magazine site management and transport of explosives	No adverse residual impact anticipated



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	Options considered are not practicable after comparing the implementation cost with maximum justifiable expenditure				