

Appendix 14.2 – 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					
<p>Existing residential premises, government, institution and community premises, and open space, within the Project area and in the vicinity of the Project</p>	<p><u>Scenario 1</u> TSP</p> <ul style="list-style-type: none"> Max. 1-hour average TSP conc.: 143 – 497 µg/m³ <p>RSP</p> <ul style="list-style-type: none"> 10th highest 24-hour average RSP conc.: 71 – 91 µg/m³ Annual average RSP conc.: 29 – 47 µg/m³ <p>FSP</p> <ul style="list-style-type: none"> 36th highest 24-hour average FSP conc.: 27 – 31 µg/m³ Annual average FSP conc.: 17 – 20 µg/m³ <p><u>Scenario 2</u> TSP</p> <ul style="list-style-type: none"> Max. 1-hour average TSP conc.: 143 – 497 µg/m³ <p>RSP</p> <ul style="list-style-type: none"> 10th highest 24-hour average RSP conc.: 71 – 84 µg/m³ Annual average RSP conc.: 	<ul style="list-style-type: none"> EIAO-TM 1-hr average TSP Conc: 500 µg/m³ New AQOs (enforced in Jan 2022) 24-hr Average RSP Conc: 100 µg/m³ (Number of exceedance allowed: 9) Annual Average RSP Conc: 50 µg/m³ 24-hr Average FSP Conc: 50 µg/m³ (Number of exceedance allowed: 35) Annual Average FSP Conc: 25 µg/m³ 	<p><u>Scenario 1</u> TSP: No exceedance was predicted. RSP: No exceedance was predicted. FSP: No exceedance was predicted. Annual average: No exceedance was predicted.</p> <p><u>Scenario 2</u> TSP: No exceedance was predicted. RSP: No exceedance was predicted. FSP: No exceedance</p>	<ul style="list-style-type: none"> Watering once every two hours on heavy construction works sites, exposed site surfaces and unpaved haul roads to reduce dust emission by 91.7%, subject to actual site condition. Dust suppression measures stipulated in the Air Pollution Control (Construction Dust) Regulation and good site practices would be carried out 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 as far as practicable to minimise exhaust emission from NRMMs during construction phase. Avoid the use of exempted Non-road Mobile Machineries (NRMMs) and deploy electrified NRMMs as far as practicable to minimise exhaust emission from 	<p>No adverse residual impacts are anticipated</p>

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	29 – 36 $\mu\text{g}/\text{m}^3$ FSP <ul style="list-style-type: none"> • 36th highest 24-hour average FSP conc.: 27 – 30 $\mu\text{g}/\text{m}^3$ • Annual average FSP conc.: 17 – 19 $\mu\text{g}/\text{m}^3$ 		was predicted. Annual average: No exceedance was predicted.	NRMMS during construction phase.	
Noise Impact					
Construction Phase					
Existing and planned NSRs within the Project	54 – 91 dB(A)	<ul style="list-style-type: none"> • Annex 5 and 13 of EIAO-TM • $\text{Leq}_{(30 \text{ min})}$ 75dB(A) at 1m the façade of residential dwellings • $\text{Leq}_{(30 \text{ min})}$ 70dB(A) at 1m from the façade of schools during normal teaching hour • $\text{Leq}_{(30 \text{ min})}$ 65dB(A) at 1m from the façade of schools during examination period 	<ul style="list-style-type: none"> • Residential NSRs: exceed the noise criteria by up to 16 dB(A) • Educational NSRs: exceed the noise criteria by up to 21 dB(A) and 26 dB(A) during normal teaching hour and examination period respectively 	<ul style="list-style-type: none"> • Good site practices to limit noise emissions at the sources. • Use of quiet construction method or powered mechanical equipment (PME) and quality powered mechanical equipment (QPME). • Use of movable noise barrier, noise enclosure, noise insulating fabric, etc to screen noise from construction plant. • Sequencing operation of construction activities at critical works areas. • Maintain setback distance of the use of PMEs from critical NSRs. • Avoid using specific noisy 	<ul style="list-style-type: none"> • The cumulative mitigated predicted construction noise levels would range from 54 to 75 dB(A) within the criterion. • With the implementation of the proposed noise mitigation measures and further mitigation measures, no residual impact is anticipated.

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				PMEs during examination periods. <ul style="list-style-type: none"> Avoid conducting construction activities during restricted hours as far as practicable. 	
Operation Phase (Fixed Plant Noise)					
Existing and planned NSRs within the Project	A preliminary fixed plant noise assessment has been conducted to estimate the maximum allowable sound power levels of the fixed plant noise sources based on no exceedances at the NSRs.	<ul style="list-style-type: none"> EIAO-TM Annex 5: ANL-5dB(A) / prevailing background for planned noise sources 	No exceedance was predicted	<ul style="list-style-type: none"> Installation of silencer for the exhaust of ventilation system, where necessary. Proper selection of quiet plant aiming to reduce the tonality at NSRs. 	No residual fixed plant noise impact is predicted at the existing and planned NSRs with the implementation of proposed measures and adoption of maximum allowable SWLs of fixed plant.
Operation Phase (Railway Noise)					
Existing and planned NSRs within the Project	Maximum predicted rail noise levels of existing and planned NSRs at various assessment scenarios would be: <ul style="list-style-type: none"> Leq_(30 min) 63 dB(A) during daytime/ evening Leq_(30 min) 62 dB(A) during night-time 	<ul style="list-style-type: none"> EIAO-TM Annex 5 Appropriate ANLs shown in Table 2 of the Technical Memorandum for the Assessment of Noise from Places Other than Domestic Premises, Public 	Exceedances of the criteria up to 7 dB(A) at night-time period	<ul style="list-style-type: none"> Implementation of a package of noise mitigation measures including the provision of noise barrier and enclosure with acoustic panel or sound absorption lining. 	<ul style="list-style-type: none"> All existing and planned NSRs would comply with criteria. No unacceptable residual impact is predicted. No adverse cumulative rail

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	<ul style="list-style-type: none"> Leq_(24 hrs) 63 dB(A) 	Places or Construction Sites <ul style="list-style-type: none"> Hong Kong Planning Standards and Guidelines 			noise impact is expected.
Water Quality Impact					
Construction Phase					
<ul style="list-style-type: none"> Tuen Mun River Channel Tuen Mun Typhoon Shelter Secondary contact recreation subzone Tuen Mun flushing water intake 	Potential water quality impacts would arise from the following: <ul style="list-style-type: none"> Construction works at Tuen Mun River Channel; General construction activities; Construction site runoff; Construction works in close proximity to inland water; Accidental spillage of chemicals; Sewage effluent from construction workforce; and Groundwater from Contaminated Areas, Contaminated Site Runoff and Wastewater from Land Decontamination. 	<ul style="list-style-type: none"> Annexes 6 and 14 of the EIAO-TM Water Quality Objectives for the North Western Water Control Zone (WCZ) Technical Memorandum on Standards for Effluents Discharged into Drainage and Sewerage Systems, Inland and Coastal Waters (TM-DSS) Practice Note for Professional Persons (ProPECC) PN 1/94 DSD Technical Circular No. 1/2017 "Temporary Flow Diversions and Temporary Works Affecting Capacity in Stormwater System" 	N/A	<ul style="list-style-type: none"> Phased piling works in Tuen Mun River. Implementation of the proposed mitigation measures including installation of casing/concrete cofferdam and watertight precast pile cap shells to isolate the construction activities from the river water, use of water pumps to collect any construction site runoff and ingress/seepage water within the concrete cofferdam and watertight precast pile cap shells to the on-site wastewater treatment facilities for treatment to satisfactory levels before discharge, and deployment of silt curtains to completely enclose the concrete cofferdam/watertight precast pile cap shells prior 	No unacceptable residual impact is predicted.

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				<p>to setting up piling works and installation of concrete cofferdam/watertight precast pile cap shells.</p> <ul style="list-style-type: none"> Mitigation measures and good site practices in ProPECCPN 1/94 "Construction Site Drainage" and ETWB TC (Works) No. 5/2005 "Protection of natural streams / rivers from adverse impacts arising from construction works", as well as other good site practices to minimise the potential water quality impacts from the construction activities. 	
Operation Phase					
<ul style="list-style-type: none"> Tuen Mun River Channel Tuen Mun Typhoon Shelter Secondary contact recreation subzone Tuen Mun flushing water intake 	<p>Potential water quality impacts would arise from:</p> <ul style="list-style-type: none"> Sewage and wastewater effluents from stations; Non-point source surface run-off from new impervious areas including viaduct; and Hydrodynamic and water quality impact on Tuen Mun River Channel. 	<ul style="list-style-type: none"> Annexes 6 and 14 of the EIAO-TM Water Quality Objectives for the North Western Water Control Zone (WCZ) Technical Memorandum on Standards for Effluents Discharged into Drainage and Sewerage Systems, Inland and Coastal Waters (TM-DSS) 	N/A	<ul style="list-style-type: none"> Best Management Practices for stormwater to reduce stormwater pollution. 	No unacceptable residual impact is predicted.

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		<ul style="list-style-type: none"> Practice Note for Professional Persons (ProPECC) PN 1/94 			
Waste Management Implications					
Construction Phase					
<p>C&D waste, general refuse, chemical waste, land-based sediments will be generated.</p>	<ul style="list-style-type: none"> Around 27,930 m³ of non-inert C&D materials and 97,202 m³ of inert C&D materials will be generated from excavation, demolition works, site formation, construction of facilities and station Around 228 kg per day of general refuse will be generated from construction works and site-based staff and workers Small to a few hundred litres per month of chemical waste will be generated from plant maintenance and operation of equipment and machineries Around 2,840 m³ of excavated sediment generated from land-based piling works and excavation works 	<ul style="list-style-type: none"> Annex 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) Ordinance (Cap. 28) Public Health and Municipal Services Ordinance (Cap. 132BK) – Public Cleansing and Prevention of Nuisances Regulation Dumping at Sea Ordinance (Cap. 466) Buildings Ordinance 	N/A	Implementation of good site practices and waste reduction measures.	No unacceptable residual impact is predicted.

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		(Cap. 123) <ul style="list-style-type: none"> Practice Notes for Authorized Persons, Registered Structural Engineers and Registered Geotechnical Engineers No. 252 ADV-21 - Management Framework for Disposal of Dredged/Excavated Sediment 			
Operation Phase					
Chemical waste, and general refuse will be generated.	<ul style="list-style-type: none"> Small to a few hundred litres per month of chemical waste will be generated from maintenance and operation of equipment and machineries 270 kg/day of general refuse will be generated from future staff and commercial operators A few hundred litres of chemical waste per month from maintenance activities 	<ul style="list-style-type: none"> Annex 7 and 15 of the EIAO-TM Waste Disposal Ordinance (Cap. 354) Waste Disposal (Chemical Waste) (General) Regulation (Cap. 354C) Public Health and Municipal Services Ordinance (Cap. 132BK) – Public Cleansing and Prevention of Nuisances Regulation 	N/A	Implementation of good site practices and waste reduction measures	No unacceptable residual impact is predicted.
Land Contamination					

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Onsite construction workers and future occupants	Potential health risk to the onsite workers and future occupants would arise from direct contact of the potentially contaminated materials	<ul style="list-style-type: none"> • 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 Manual for Use of Risk-Based Remediation Goals (RBRGs) for Contaminated Land Management • Guidance Notes for Contaminated Land Assessment and Remediation • Practice Guide for Investigation and Remediation of Contaminated Land 	N/A	<p>Site re-appraisal and submission of supplementary Contamination Assessment Plan(s) (CAPs) should be carried out for the whole Project Area at a later stage of the Project in order to address any new contamination issues caused by the (i) changes in operation of the identified potentially contaminated site and (ii) changes of land use within the Project Area. The associated site investigation (SI) works and any necessary remediation action are recommended to be carried out after the operation of concerned area(s) has ceased but prior to the commencement of construction works at the concerned area(s).</p> <p>The appropriate remediation methods should be selected in the Remediation Action Plan (RAP) based on the SI findings.</p>	No unacceptable residual impact is predicted.
Terrestrial Ecology					
Construction Phase					
Developed Area and Modified Watercourse	<ul style="list-style-type: none"> • Direct permanent loss of habitat (about 2.50 ha) • Temporary habitat loss (about 21.29 ha) • Shading effect on the habitats underneath 	<ul style="list-style-type: none"> • 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 	N/A	<ul style="list-style-type: none"> • Reinstatement of temporary works sites. • Provision of shade tolerant plants at the shaded area under the viaduct. • Good suite practices for construction. 	No unacceptable residual impact anticipated.

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	viaduct structure	Countryside Ordinance (Cap. 96)		<ul style="list-style-type: none"> Further enhancement overall greening. 	
Roosting and Breeding Ground	<ul style="list-style-type: none"> Direct loss of the Short-nosed Fruit Bat (SNFB) roost Direct loss of ardeid foraging ground Disturbance to the ardeid night roost 	<ul style="list-style-type: none"> Wild Animals Protection Ordinance (Cap. 170) 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 the Hong Kong Planning Standard and Guidelines (HKPSG) Development Bureau (DEVB) TC(W) No. 4/2020 Tree Preservation; and Drainage Services Department Practice Note No. 1/2015 Guidelines on Environmental and Ecological Considerations for River Channel Design 	N/A	<ul style="list-style-type: none"> No noisy construction activities using the power mechanical equipment (PME) should be conducted within 100 m from the ardeids night roosting site after 30 minutes before sunset. Construction activities within the 100 m from the ardeids night roosting buffer zone should be conducted during daytime. Any activities within the 100 m from the ardeids night roosting buffer zone should follow control of working hours. Concreting works within the 100 m from the ardeids night roosting buffer zone should be limited to daytime under normal circumstances. Monthly monitoring and observation on condition of night roost will be carried out during the construction phase and during the dry season in the first year of the operational phase. 	No unacceptable residual impact anticipated.

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				<ul style="list-style-type: none"> • Pre-construction bat survey to verify that no SNFB individuals are roosting within the Chinese Fan-palm trees in the event that Chinese Fan-palm need to be felled. • Replantation of Chinese Fan-palm trees during the reinstatement of temporary works area, where necessary, to provide roosting opportunities for SNFB. • Incorporation of ardeid perching and foraging structures along the proposed alignment. 	
Species of Conservation Importance / Wildlife	<ul style="list-style-type: none"> • Potential direct injury / mortality of wildlife species from construction activities 		N/A	<ul style="list-style-type: none"> • Use of non-transparent panels as the noise enclosure, as well as adopting non-glaring tinted materials, or superimposing dark patterns at the majority of facade glazing along barriers and station structures. • Bridge structure across the TMRC should also be well-illuminated to increase visibility. • Noise mitigation measures by effective placing of site hoarding, temporary noise barriers and material 	No unacceptable residual impact is anticipated.

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				stockpiles where practicable as screening, shut down of machines and plants that are in intermittent use, and the use of quality PME to limit noise emissions at source. <ul style="list-style-type: none"> • Glare reduction measures such as restriction of construction hours, hoarding provision, night-time lighting control and avoidance of any directional lightings to the adjoining habitats and roosts. • Dust suppression measures (such as regular spraying of haul roads, proper storage of construction materials, and environmental control measures as stipulated in the Air Pollution Ordinance (Construction Dust) Regulation) to avoid and minimise emission and dispersal dust. 	
Ardeid Flight Line	<ul style="list-style-type: none"> • Insignificant potential obstruction of flight line 		N/A	<ul style="list-style-type: none"> • Ardeids are anticipated to fly at a greater height or to use alternative flight lines to avoid the construction activities. 	No unacceptable residual impact is anticipated.
Operation Phase					
Wildlife and Bird Collision	<ul style="list-style-type: none"> • Potential injury and mortality to wildlife from extended rail network 	<ul style="list-style-type: none"> • Annexes 8 and 16 of the EIAO-TM and the EIAO Guidance Notes 	N/A	<ul style="list-style-type: none"> • Adoption of non-transparent panels as the noise enclosure, as well as 	No unacceptable residual impact anticipated

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		(No. 3/2010, 6/2010, 7/2010, and 10/2010) <ul style="list-style-type: none"> • Forests and Countryside Ordinance (Cap. 96) • Wild Animals Protection Ordinance (Cap. 170) • Protection of Endangered Species of Animals and Plants Ordinance (Cap. 586) 		<ul style="list-style-type: none"> • adopting non-glaring tinted materials, or superimposing dark patterns at the majority of facade glazing along barriers and station structures. • Well-illumination of bridge structure across the TMRC to increase visibility for facilitating ardeid flight above or under the bridge. 	
Ardeid Flight Line	<ul style="list-style-type: none"> • Insignificant potential obstruction of flight line 	<ul style="list-style-type: none"> • Town Planning Ordinance (Cap. 131) 	N/A	<ul style="list-style-type: none"> • Ardeids are anticipated to fly at a greater height or to use alternative flight lines to avoid the aboveground structures. 	No unacceptable residual impact is anticipated.
Ardeid Night Roost at Tuen Mun Park	<ul style="list-style-type: none"> • Disturbance to ardeid night roost 	<ul style="list-style-type: none"> • Water Pollution Control Ordinance (Cap. 358) • Chapter 10 of the Hong Kong Planning Standard and Guidelines (HKPSG) • Development Bureau (DEVB) TC(W) No. 4/2020 Tree Preservation; and • Drainage Services Department Practice Note No. 1/2015 Guidelines on Environmental and Ecological Considerations for 	N/A	<ul style="list-style-type: none"> • Subject to detailed design stage, an extent of about 85m long and 1m high vertical non-transparent panels would be established along the eastern side of the viaduct which is adjacent to the ardeid night roost. The provision of this vertical panel on top of the parapet would be able to reach the height of the operating railway train windows, thus providing a shielding effect. 	No unacceptable residual impact is anticipated.

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		River Channel Design			
Landscape and Visual Impact					
Construction Phase					
Existing Landscape Resources (LRs) and Landscape Character Areas (LCAs) and Visually Sensitive Receivers (VSRs) within the assessment area	<p><i>Key Affected LR:</i> <u>Insubstantial</u> LR 1.6, LR 1.8B, LR 2, LR 3, LR 4, LR 5.1, LR 7</p> <p><u>Slight</u> LR 1.7, LR 5.2, LR 6.1, LR 6.2, LR 6.3, LR 6.5</p> <p><u>Moderate</u> LR1.1, LR 1.3, LR 1.4, LR 1.5, LR 1.8, LR 1.9, LR 1.10, LR 6.4</p> <p><u>Substantial</u> LR1.2, LR 5.3, LR 6.6, LR 8</p> <p><i>Key Affected LCAs:</i> <u>Insubstantial</u> LCA 4, LCA 7, LCA 8</p> <p><u>Slight</u> LCA 2, LCA 3, LCA 5, LCA 6</p> <p><u>Moderate</u></p>	<ul style="list-style-type: none"> Environmental Impact Assessment Ordinance (EIAO) (Cap.499 S.16) and the Technical Memorandum on EIA Process (EIAO-TM), particularly Annexes 10 and 18; 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); Forests and Countryside Ordinance (Cap 96) and its subsidiary legislations; Plant Varieties Protection Ordinance (Cap. 490); Hong Kong Planning 	Not applicable	<ul style="list-style-type: none"> CM1 – Transplantation of existing trees where practical CM2 – Control of night-time lighting glare to prevent light overspill to the nearby VSRs and into the sky CM3 - Erection of decorative screen hoarding or hoarding compatible with the surrounding setting CM4 – Management of facilities on work sites by controlling the height and disposition/arrangement of all facilities on the works site CM5 – All hard and soft landscape areas disturbed temporarily during construction should be reinstated on like-to-like basis, to the satisfaction of the relevant Government Departments CM 6 – Tree without impact from proposed works should 	<p><i>Key Affected LR:</i> <u>Insubstantial</u> LR 1.6, LR 1.8B, LR 2, LR 3, LR 4, LR 5.1, LR 7, LCA 4, LCA 7</p> <p><u>Slight</u> LR 1.7, LR 5.2, LR 6.1, LR 6.2, LR 6.3, LR 6.5, LCA 2, LCA 3, LCA 5, LCA 6</p> <p><u>Moderate</u> LR 1.1, LR 1.3, LR 1.4, LR 1.5, LR 1.6, LR 1.8, LR 1.9, LR 1.10, LR 6.4, LCA 1</p> <p><u>Substantial</u> LR 1.2, LR 5.3, LR 6.6, LR 8, LCA 8</p> <p><i>Key Affected VSRs:</i> <u>Nil</u> O8, O14, R11</p>

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	<p>LCA 1</p> <p><i>Key Affected VSRs:</i></p> <p><u>Nil</u> O8, O14, R11</p> <p><u>Insubstantial</u> GIC7, T5</p> <p><u>Slight</u> O3, O5, O10, I2, I3, T1</p> <p><u>Moderate</u> O1, O2, O6, O9, O12, O15, R1, R2, R3, R4, R5, R6, R9, R10, GIC1, GIC2, GIC3, GIC4, GIC5, GIC6, I1, C1, T2, T3</p> <p><u>Substantial</u> O4, O7, O11, O13, R7, R8, T4</p>	<p>Standards and Guidelines (HKPSG) Chapters 4, 10 and 11;</p> <ul style="list-style-type: none"> • 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. 2/2012 - Allocation of Space for Quality Greening on Roads; • DEVB TC(W) No. 6/2015 - Maintenance of Vegetation and Hard Landscape Features; • DEVB TC(W) No. 4/2020 - Tree Preservation; • DEVB TC(W) No. 5/2020- Registration and Preservation of Old and Valuable Trees; • DEVB TC(W) No. 9/2020 Blue-Green 		<p>be retained as far as possible</p>	<p><u>Insubstantial</u> O3, O10, GIC7, I2, I3, T5</p> <p><u>Slight</u> O5, O9, GIC1, I1, T1</p> <p><u>Moderate</u> O1, O2, O6, O12, O15, R1, R2, R3, R4, R5, R6, R7, R8, R9, R10, GIC2, GIC3, GIC4, GIC5, GIC6, C1, T2, T3</p> <p><u>Substantial</u> O4, O7, O11, O13, T4.</p>

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		Drainage Infrastructure; <ul style="list-style-type: none"> • LAO PN 2/2020 - Tree Preservation and Removal Proposal for Building Development in Private Projects Compliance of Tree Preservation Clause under Lease; • 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; and • Study on Landscape Value Mapping of Hong Kong 			
Operation Phase					
Existing Landscape Resources (LRs) and Landscape Character Areas (LCAs) and Visually Sensitive Receivers (VSRs) within the	Key Affected LRs: <u>Insubstantial</u> LR 1.6, LR 1.8B, LR 2, LR 3, LR 4, LR 5.1, LR 7	<ul style="list-style-type: none"> • Environmental Impact Assessment Ordinance (EIAO) (Cap.499 S.16) and the Technical Memorandum on EIA 	Not applicable	<ul style="list-style-type: none"> • OM1 – Aesthetically pleasing design as regard to the form, material and finishes at the Entrance, Plant Buildings, Ventilation Shafts and 	Level of impact for all VSRs would be slight to insubstantial in Year 10 except moderate impact expected on O4, O6, O7, R4, R7, R8,

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assessment area	<p><u>Slight</u> LR 1.7, LR 5.2, LR6.1, LR 6.2, LR 6.3, LR 6.5</p> <p><u>Moderate</u> LR 1.1, LR 1.3, LR 1.4, LR 1.5, LR 1.8, LR 1.9, LR 1.10, LR 6.4,</p> <p><u>Substantial</u> LR1.2, LR 5.3, LR 6.6, LR 8</p> <p><i>Key Affected LCAs:</i> <u>Insubstantial</u> LCA 4, LCA 7, LCA 8</p> <p><u>Slight</u> LCA 2, LCA 3, LCA 5, LCA 6</p> <p><u>Moderate</u> LCA 1</p> <p><i>Key Affected VSRs:</i> <u>Insubstantial</u> GIC7, T5</p> <p><u>Slight</u> O3, O5, O8, O10, I2, I3, T1</p>	<p>Process (EIAO-TM), particularly Annexes 10 and 18;</p> <ul style="list-style-type: none"> 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); Forests and Countryside Ordinance (Cap 96) and its subsidiary legislations; Plant Varieties Protection Ordinance (Cap. 490); Hong Kong Planning Standards and Guidelines (HKPSG) Chapters 4, 10 and 11; AFCD Nature Conservation Practice Note No. 2 - Measurement of Diameter at Breast Height (DBH); AFCD Nature 		<p>associated engineering facilities</p> <ul style="list-style-type: none"> OM2 – Tree Planting and shrub planting to provide screening to the Station building, viaduct and associated engineering facilities and serves as roadside amenity planting OM3 – Roof Greening at the roof area of the propose structures as far as practical OM 4 – Roadside soft landscape at the station buildings and associated engineering facilities. Shade tolerant plants with tall to medium height planted under the viaduct OM 5a – Provision of New Open Space for recreational use OM 5b - Provision of new hard and soft landscape area - provision of street furniture and tree pit planting along the pedestrian as streetscape improvement OM 6 – Compensatory tree planting provided in 	R9, R10 and R11.

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)
	<p><u>Moderate</u> O1, O2, O6, O9, O12, O14, O15, R1, R2, R3, R4, R5, R6, R9, R10, R11, GIC1, GIC2, GIC3, GIC4, GIC5, GIC6, I1, C1, T2, T3</p> <p><u>Substantial</u> O4, O7, O11, O13, R7, R8, T4</p>	<p>Conservation Practice Note No. 3 – The Use of Plant Names;</p> <ul style="list-style-type: none"> • 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; • DEVB TC(W) No. 4/2020 - Tree Preservation; • DEVB TC(W) No. 5/2020- Registration and Preservation of Old and Valuable Trees; • DEVB TC(W) No. 9/2020 Blue-Green Drainage Infrastructure; • LAO PN 2/2020 - Tree Preservation and Removal Proposal for Building Development in Private Projects Compliance of Tree Preservation Clause under Lease; • Guidelines on Tree 		<p>accordance with DEVB TC(W) 4/2020 – Tree Preservation to compensate for felled trees and maintained until end of the establishment period. Compensatory shrub planting provided to compensate for the loss of shrub planting in amenity areas.</p>	

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		Transplanting (September 2014) issued by Greening, Landscape and Tree Management (GLTM) Section of DevB; <ul style="list-style-type: none"> Guidelines on Tree Preservation during Development (April 2015) issued by GLTM Section of DevB; and Study on Landscape Value Mapping of Hong Kong 			
Cultural Heritage					
Construction Phase					
Built heritage and areas with archeological potential	<ul style="list-style-type: none"> Neither direct nor indirect impact is anticipated on built heritage Adverse impact on archaeological potential area is not anticipated 	<ul style="list-style-type: none"> Antiquities and Monuments Ordinance (A&MO) (Cap.53) Environmental Impact Assessment Ordinance (EIAO) (Cap.499) and Technical Memorandum on Environmental Impact Assessment Process (EIAO-TM) Guidelines for Cultural Heritage Impact 	N/A	<ul style="list-style-type: none"> If there are any buildings / structures both at grade level and underground which were built on or before 1969 found within the works sites/ works areas during the excavation, the Project Proponent will alert AMO in an early stage or once identified. The Contractor should inform the AMO in case of discovery of antiquities or supposed antiquities in the course of works, so that appropriate mitigation measures, if 	<ul style="list-style-type: none"> No adverse residual impact anticipated

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		Assessment (GCHIA) • Hong Kong Planning Standards and Guidelines (HKPSG)		needed, can be timely formulated and implemented in agreement with AMO.	
Operation Phase					
Built heritage and areas with archeological potential	• No adverse impact on built heritage, archaeology, or any other cultural heritage resources is expected	<ul style="list-style-type: none"> • Antiquities and Monuments Ordinance (A&MO) (Cap.53) • Environmental Impact Assessment Ordinance (EIAO) (Cap.499) and Technical Memorandum on Environmental Impact Assessment Process (EIAO-TM) • Guidelines for Cultural Heritage Impact Assessment (GCHIA) • Hong Kong Planning Standards and Guidelines (HKPSG) 	N/A	• N/A	• No adverse residual impact anticipated
Hazard to Life					
Construction Phase					
Population at or near the LPG Store in Tuen Mun Area 44	• The off-site individual risk is less than 1×10^{-5} per year, it is considered acceptable and in compliance with the	• EIAO-TM Annex 4	Not Applicable	• Good safety practices	• No adverse residual impact anticipated

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)
	relevant criterion in Annex 4 of EIAO-TM. Part of the FN curve falls within the "ALARP" region.				
Operation Phase					
Population at or near the LPG Store in Tuen Mun Area 44	<ul style="list-style-type: none"> The off-site individual risk is less than 1×10^{-5} per year, it is considered acceptable and in compliance with the relevant criterion in Annex 4 of EIAO-TM. Part of the FN curve falls within the "ALARP" region. 	<ul style="list-style-type: none"> EIAO-TM Annex 4 	Not Applicable	<ul style="list-style-type: none"> No mitigation measures required 	<ul style="list-style-type: none"> No adverse residual impact anticipated