Summary of Environmental Impacts Associated with the Project

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)
Cultural Heritage					
Construction Phase					
Archaeological Sites	Former Tai Hom Village • The presence of the sparse Tang/ Song Dynasty layer extends to the north-eastern part of the former Tai Hom Village site would be directly impacted by the construction of the proposed DIH at Diamond Hill Lung Tsun Stone Bridge and Former Kowloon City Pier • The remains of the Lung Tsun Stone Bridge and former Kowloon City Pier would not be affected by the construction of the proposed KAT and refuge sidings at Kai Tak	• Guidelines for Cultural Heritage Impact Assessment • EIAO-TM Annex 10 and Annex 19	• Not Applicable	Former Tai Hom Village • A survey-cum-excavation works to be conducted prior to the construction works at the former Tai Hom Village. An Archaeological Action Plan (AAP) following the Guideline for Archaeological Impact Assessment should be submitted to the Antiquities and Monuments Office (AMO) for agreement. Lung Tsun Stone Bridge and Former Kowloon City Pier • A buffer zone for Lung Tsun Stone Bridge and Former Kowloon City Pier would be maintained	• No adverse residual impacts would be anticipated.
Built Heritages	Former Royal Air Force Hangar • The entire structure of the Former Royal Air Force Hangar	• Guidelines for Cultural Heritage Impact Assessment	• Not Applicable	Former Royal Air Force Hangar • Documentation prior to disassembling, temporary	• No adverse residual impacts would be anticipated.

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	will be directly impacted by the construction of the DIH <u>Old Pillbox</u> • The proposed east end of the DIH station box will encroach onto the footprint of the Old Pillbox <u>Stone House</u> • There will not be any impact on the Stone House as it is located outside the temporary at-grade works sites	• EIAO-TM Annex 10 and Annex 19		storage of portions of historical interest • Display of retained portions and a model (as per the conservation plan) within CDA site <u>Old Pillbox</u> • Documentation prior to disassembling, temporary storage • Reinstatement (as per the conservation plan) within CDA site	
Operational Phase					
Archaeological Sites	<u>Former Tai Hom Village</u> • Recommended mitigation measures would be conducted prior to the construction and thus further mitigation measure during the operational phase is therefore not considered necessary <u>Lung Tsun Stone Bridge and Former Kowloon City Pier</u> • No impacts anticipated during	• Guidelines for Cultural Heritage Impact Assessment • EIAO-TM Annex 10 and Annex 19	• Not Applicable	<u>Former Tai Hom Village</u> • No mitigation measures are recommended during operational phase. <u>Lung Tsun Stone Bridge and Former Kowloon City Pier</u> • No mitigation measures are recommended during operational phase.	• No adverse residual impacts would be anticipated.

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	operation phase of the Project due to its considerable distance from proposed KAT and refuge sidings				
Built Heritages	<u>Former Royal Air Force Hangar</u> • As detailed photographic and cartographic records are recommended to document the Hangar prior to disassembling them, no further mitigation measure is required during the operational phase of the Project <u>Old Pillbox</u> • As detailed photographic and cartographic records are recommended to document the Pillbox prior to disassembling them, no further mitigation measure is required during the operational phase of the Project	• Guidelines for Cultural Heritage Impact Assessment • EIAO-TM Annex 10 and Annex 19	• Not Applicable	<u>Former Royal Air Force Hangar</u> • No mitigation measures will be required for the built heritage <u>Old Pillbox</u> • No mitigation measures will be required for the built heritage	• No adverse residual impacts would be anticipated.
<u>Ecology</u>					
Construction Phase					
Ecological resources	<u>Habitat Loss (Project Site)</u>	• EIAO-TM Annex 8 and	• Not Applicable	• Habitat loss restricted to areas	• Residual ecological

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within and in the vicinity of the Project area	• Habitats affected will include 0.44 ha of channelised watercourse, 1.35 ha grassland, 1.62 ha plantation and 40.08 ha urban/ residential area <u>Tree Felling</u> • Plantation trees (mostly non-native) will be affected (transplanted or felled) <u>Disturbance</u> Indirect impacts which cause local disturbance to habitats and fauna <u>Water Quality</u> • Indirect impact associated with construction site run-off to channelised watercourse and associated fauna.	Annex 16 • 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) • IUCN Redlist		of low ecological value • Tree compensation will be made according to ETWB TCW No. 3/2006 as far as practicable • Good site practice	impacts resulting from the proposed works would largely be limited to the loss of relatively low ecological value habitats. Residual impacts on terrestrial ecology caused from the Project are considered as very minor and acceptable
Operational Phase					
Ecological resources within and in the vicinity of the Project area	<u>Flora and fauna</u> • Indirect	• EIAO-TM Annex 8 and Annex 16 • Forests and Countryside Ordinance (Cap. 96) • Wild Animals	• Not Applicable	• No mitigation would be required	• No adverse residual impacts would be anticipated.

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		Protection Ordinance (Cap. 170) • Country Parks Ordinance (Cap. 208) • Protection of Endangered Species of Animals and Plants Ordinance (Cap. 586) • IUCN Redlist			
Landscape and Visual					
Construction Phase					
Landscape Resources (LRs), Landscape Character Areas (LCAs) within the Study Area Visually Sensitive Receivers (VSRs) within the Primary Zone of Visual Influence	• Substantial to insubstantial significance on LRs within the Study Area • Moderate to insubstantial significance on LCAs within the Study Area • Substantial to slight significance on VSRs within Primary Zone of Visual Influence	• EIAO (Cap. 499). • EIAO-TM Annex 10 and Annex 18 • ETWB TC(W) No. 2/2004 • ETWB TC(W) No. 3/2006	• Not Applicable	• CM1 - Decorative Hoarding • CM2 - Management of facilities on work sites • CM3 - Tree Transplanting	• Substantial to insubstantial significance on LRs within the Study Area • Moderate to insubstantial significance on LCAs within the Study Area • Substantial to slight significance on VSRs within Primary Zone of Visual Influence

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Operational Phase					
Landscape Resources (LRs), Landscape Character Areas (LCAs) within the Study Area Visually Sensitive Receivers (VSRs) within the Primary Zone of Visual Influence	• Substantial to insubstantial significance on LRs within the Study Area • Slight to insubstantial significance on LCAs within the Study Area • Moderate to slight significance on VSRs within Primary Zone of Visual Influence	• EIAO (Cap. 499). • EIAO-TM Annex 10 and Annex 18 • ETWB TC(W) No. 2/2004 • ETWB TC(W) No. 3/2006	• Not Applicable	• OM1 - Compensation Tree Planting • OM2a - Screen Planting • OM2b - Landscape Re-instatement • OM3 - Aesthetic landscape and architectural treatment on Station / Entrances/ Ventilation Shaft • OM5 - Re-instatement of excavated area • OM7 - Aesthetic landscape and architectural treatment for DIH • OM8 - Roof greening of large built structures • OM9 - Aesthetic design on Noise Barrier	• Slight to insubstantial significance on LRs within the Study Area in Year 10 of operation • Slight to insubstantial significance on LCAs within the Study Area in Year 10 of operation • Slight to insubstantial significance on VSRs within Primary Zone of Visual Influence in Year 10 of operation
<u>Construction Dust</u>					
Construction Phase					
Existing residential, premises, educational,	• 1-hour Average TSP Conc.:	• EIAO-TM and AQO	• Exceed EIAO-TM (1-hr) criterion by up to 2579	• Watering on the active works areas, exposed areas and	• The mitigated impact prediction results for 1-

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industrial, clinic/ home for the aged, worship, government, institution and community and performance art centres in Hung Hom, Kai Tak and Diamond Hill Future residential premises in Hung Hom and Kai Tak area 50 assessment points	294 – 3079 µg/m^3 • 24-hour Average TSP Conc.: 127 – 1102 µg/m^3 • Annual Average TSP Conc.: 75.5 – 83.3 µg/m^3	• 1-hr Average TSP Conc: 500 µg/m^3 • 24-hr Average TSP Conc: 260 µg/m^3 • Annual Average TSP Conc: 80 µg/m^3	µg/m^3 • Exceed AQO (24-hr) criterion by up to 842 µg/m^3 • Exceed AQO (Annual) criterion by up to 3.3 µg/m^3	paved haul roads to reduce dust emission • 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.	hr, 24-hr and Annual Average TSP Conc. are as follows. • 1-hour Average TSP Conc.: 137 – 484 µg/m^3 • 24-hour Average TSP Conc.: 89 – 202 µg/m^3 • Annual Average TSP Conc.: 75.3 – 78.3 µg/m^3 • No adverse residual 1-hr, 24-hr and annual dust impacts would be anticipated.
Operational Phase					
As the train will be electrically operated, air quality impact is therefore not anticipated during operational phase.					
<u>Airborne Noise</u>					
Construction Phase					
Existing residential premises and educational institutions in Hung Hom and Diamond Hill	• Predicted noise levels would range from 62 to 90 dB(A)	• EIAO-TM Annex 5 for non-restricted hours for domestic premises: 75 dB(A), for educational institution is 70 dB(A) (65 dB(A) during	• Exceed the EIAO-TM noise criterion by up to 15 dB(A)	• Adoption of good site practices, optimisation of construction methodology, quieter plant, temporary movable noise barriers enclosure and acoustic	• The mitigated predicted noise levels for the Project alone would range from 55 to 75

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Future residential premises in Kai Tak and Diamond Hill 24 assessment points		examination period).		mat to minimise construction noise impact	dB(A) • Residual cumulative impact of 3 dB(A) for 1 month at NSR HUH-1-3 (Wing Fung Building) due to construction induced from the Project, SCL (TAW-HUH), SCL(MKK-HUH), SCL(HUH-ADM) and KTE. It is considered that all practicable measures have been exhausted to minimise the residual impact.
Operational Phase (Railway Noise)					
Existing residential premises in Hung Hom. 6 assessment points	Daytime($L_{eq\ 30mins,\ dB(A)}$) Predicted noise levels would be in the range of 38 to 53 dB(A) Night-time ($L_{eq\ 30mins,\ dB(A)}$) • Predicted noise levels would be in the range of 38 to 53 dB(A)	• EIAO-TM Annex 5: ANL	• No exceedance was anticipated.	• Implementation of noise barrier and semi-enclosure during the design stage	• No adverse residual impacts would be anticipated.
Operational Phase (Fixed Noise)					
Existing residential	• Maximum sound power level was	• EIAO-TM Annex 5:	• No exceedance was	• Louvers should be orientated	• No adverse residual

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premises in Hung Hom, Kai Tak and Diamond Hill 21 assessment points	predicted to meet the relevant noise criteria	ANL-5dB(A)	anticipated.	away from adjacent NSRs, preferably onto main roads which are less sensitive. • Direct noise mitigation measures including silencers, acoustic louvers and acoustic enclosures should be allowed for in the design for the ventilation shafts, stations and stabling sidings. • The façade for these plant areas/ ventilation shafts should have adequate sound insulation properties to minimise the noise emanating through the building fabric.	impacts would be anticipated.
Groundborne Noise					
Construction Phase					
Existing residential premise in Diamond Hill. 1 assessment point	Daytime • 36 dB(A) for residential NSR	• TM-Places • Daytime: 65 dB(A) for residential premises	• No exceedance was predicted.	• No mitigation would be required.	• No adverse residual impacts would be anticipated.
Operational Phase					
Existing residential premises in Hung Hom and Diamond Hill	Daytime ($L_{eq\ 30mins,\ dB(A)}$) Predicted operation ground-borne	• TM-Places • Operational ground-	• No exceedance was predicted.	• No mitigation would be required.	• No adverse residual impacts would be

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Future residential premises in Kai Tak and Diamond Hill. 10 assessment points	noise levels would range from <20 to 43 dB(A) during daytime Nighttime ($L_{eq\ 30mins,\ dB(A)}$) • Predicted operation ground-borne noise levels would range from <20 to 40 dB(A) during nighttime.	borne noise criterion: 55 dB(A) during daytime, and 45 dB(A) during nighttime			anticipated.
Water Quality					
Construction Phase					

Kai Tak Nullah	• Water quality would be affected.	• EIAO-TM;
		• Water Pollution Control Ordinance (WPCO) (Cap. 358);
		• 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
			• No exceedance was predicted.	• Appropriate and practicable mitigation measures have been proposed to control the following:
				  • Construction Runoff and Site Drainage;
				  • Tunnelling Works and Underground Works;
				  • Sewage Effluent;
				  • Groundwater Seepage; and
				  • Accidental Spillage
					• No unacceptable water quality impacts would be anticipated.

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Operational Phase					
Kai Tak Nullah	• Water quality would be affected.	• Relevant standards/ criteria stipulated under the EIAO-TM, WPCO, TM-DDS and ProPECC 5/93	• No exceedance was predicted	• Appropriate and practicable mitigation measures have been proposed to control runoff from train stabling sidings	• No unacceptable water quality impacts would be anticipated.
Waste Management					
Construction Phase					
Not applicable	• Inert C&D Materials from construction and excavation works with a total volume of approximately 1,376,660m^3 • 36,930 m^3 of non-inert C&D material. • General refuse from workforce with a daily volume of 300 kg • Chemical waste from equipment cleansing and maintenance activities	• EIAO-TM Annex 7 and Annex 15 • Waste Disposal Ordinance (Cap. 354); • Waste Disposal (Chemical Waste) (General) Regulation (Cap. 354C); • Land (Miscellaneous Provisions) Ordinance (Cap. 28); • Public Health and Municipal Services Ordinance (Cap. 132) - Public Cleansing and Prevention of	• Not applicable.	• C&D wastes would be reused (i.e. within the site and other concurrent projects) as far as practicable before off-site disposal	• No adverse residual impacts would be anticipated.

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		Nuisances Regulation; • Waste Disposal (Charges for Disposal of Construction Waste) Regulation (Cap. 354N); and • Dumping at Sea Ordinance (Cap. 466).			
Operational Phase					
Not applicable	• Insignificant amount of general refuse, industrial waste and chemical wastes to be generated from the cleansing and maintenance activities of the Project.	• Waste Disposal Ordinance (Cap. 354); and • Waste Disposal (Chemical Waste) (General) Regulation (Cap. 354C).	• Not applicable.	• Employ reputable waste collector to remove general refuse and industrial wastes from the stations on a daily basis. • Follow Code of Practice on the Packaging, Labelling and Storage of Chemical Waste in handling of chemical waste. • Employ licensed waste collector and trip-ticket system for the collection of chemical waste.	• No adverse residual impacts would be anticipated.
Land Contamination					
Construction Phase					

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Potential land contamination sites within the Project Area	• No soil or groundwater contamination was identified and therefore no remediation is required.	• Section 3 (Potential Contaminated Land Issues) of Annex 19 "Guidelines for Assessment of Impact on Sites of Cultural Heritage and Other Impacts" of the EIAO-TM. • Guidance Note for Contaminated Land Assessment and Remediation" • Practice Guide for Investigation and Remediation of Contaminated Land • Guidance Manual for Use of Risk-based Remediation Goals for Contaminated Land Management	• Not Applicable	• Not Applicable	• No adverse residual impacts would be anticipated.
Operational Phase					
Not Applicable					