

Appendix 15.2

Summary of Environmental Impacts Associated with the Project

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Sensitive Receivers / Assessment Points	Impact Prediction Results	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 ASRs	<ul style="list-style-type: none"> No adverse air quality impact arising from the construction of the Project is anticipated. 	<ul style="list-style-type: none"> AQO EIAO-TM Annex 4 	<ul style="list-style-type: none"> Not applicable 	<p>Good control measures are recommended:</p> <ul style="list-style-type: none"> Watering on the exposed work sites to reduce dust emission; and Dust suppression measures stipulated in the Air Pollution Control (Construction Dust) Regulation and good sites practices would be carried out to further minimise construction dust impact. 	<ul style="list-style-type: none"> No adverse residual impacts anticipated
Noise					
Construction Phase (Airborne Noise)					
Existing NSRs	<ul style="list-style-type: none"> Predicted unmitigated construction airborne noise levels would range from 67 to 94 dB(A) 	<ul style="list-style-type: none"> 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 examination period) 	<ul style="list-style-type: none"> Exceed the EIAO-TM noise criterion by up to 19 dB(A) 	<p>Good control measures are recommended to minimise the construction noise impact as far as practical:</p> <ul style="list-style-type: none"> Good site practices to limit noise emissions at the source; Use of quality powered mechanical equipment (QPME); Use of temporary noise barriers and noise enclosure to screen noise from relatively static PME; and Alternative use of plant items within one worksite, wherever practicable. 	<ul style="list-style-type: none"> The cumulative mitigated predicted construction noise levels would range from 64 to 74 dB(A), which are within the noise criteria. All residential premises would comply with the criterion.
Construction Phase (Groundborne Noise)					
Existing NSRs	<ul style="list-style-type: none"> The closest existing representative NSRs at Ngau Tam Mei Village are located at more than 300m away from the modification works of Chamber G. No adverse 	<ul style="list-style-type: none"> EIAO-TM Annex 5 and IND-TM Non-restricted hours for domestic premises: 65 dB(A), for educational institution is 60 dB(A) (55 dB(A) during examination period) 	<ul style="list-style-type: none"> Not applicable 	<ul style="list-style-type: none"> No mitigation measure is required 	<ul style="list-style-type: none"> No adverse residual impacts anticipated

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	groundborne construction noise impact is anticipated.				
Operational Phase (Fixed Noise)					
Existing NSRs	<ul style="list-style-type: none"> No planned fixed noise sources for the modification of Chamber G and the fresh water trunk mains for fixed noise sources impact assessment. No adverse fixed noise sources impact is anticipated. 	<ul style="list-style-type: none"> EIAO-TM Annex 5 and IND-TM Appropriate ANLs and ANLs-5 as shown in Table 2 of IND-TM or the prevailing background noise level 	<ul style="list-style-type: none"> Not applicable 	<ul style="list-style-type: none"> No mitigation measure is required 	<ul style="list-style-type: none"> No adverse residual impacts anticipated
Water Quality					
Construction Phase					
WSRs	<p>Water quality in WSRs would be deteriorated by the following construction activities:</p> <ul style="list-style-type: none"> Construction runoff and general construction activities; Sewage due to construction workforce; Construction works in close proximity of inland water; Sterilisation of water mains prior to its commission; Accidental spillage of chemicals; and Tunnelling and Underground works. 	<ul style="list-style-type: none"> EIAO-TM Annex 6 and Annex 14 WPCO (Cap. 358) DSS-TM ProPECC PN 1/23 ProPECC PN 2/23 HKPSG; and Environment, Transport and Works Bureau (ETWB) Technical Circular (Works) No. 5/2005: Protection of Natural Streams/Rivers from Adverse Impacts Arising from Construction Works 	<ul style="list-style-type: none"> Not applicable 	<ul style="list-style-type: none"> Good site practices in accordance to ProPECC PN2/23 when handling the site run-off from general site operation; Proper storage of the chemicals used during construction; All effluent discharged from the construction site should comply with the standards of the WPCO; Provide temporary sanitary facilities and posting notices about treating discharge for the workforce; Adopting practices outlined in ETWB TC (Works) No. 5/2005 where applicable; and Observing the Waste Disposal Ordinance (Cap. 354) and its subsidiary regulations in particular the Waste Disposal (Chemical Waste) (General) Regulation. 	<ul style="list-style-type: none"> No adverse residual impacts anticipated

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Operational Phase					
WSRs	No adverse water quality impact arising from the operation of the Project is anticipated.	<ul style="list-style-type: none"> • EIAO-TM Annex 6 and Annex 14 • WPCO (Cap. 358) • DSS-TM • HKPSG 	<ul style="list-style-type: none"> • Not applicable 	<ul style="list-style-type: none"> • No mitigation measure is required 	<ul style="list-style-type: none"> • No adverse residual impacts anticipated
Waste Implication					
Construction Phase					
The waste transportation routes and the waste disposal site, as well as the waste disposal outlet	<ul style="list-style-type: none"> • It is estimated that 74,010m³ of soft inert C&D material would be generated and reused on-site as far as practicable or delivered to Tuen Mun Area 38 / Tseung Kwan O Area 137 Fill Bank for reuse in other projects. • It is estimated that 173,680m³ of hard inert C&D material would be reused on-site as much as practicable and the surplus would be delivered to Tuen Mun Area 38 / Tseung Kwan O Area 137 Fill Bank for reuse in other projects. • It is estimated that 17,280m³ of non-inert C&D materials would be generated and be recycled as far as practicable (e.g. recycle timber and woody materials at Y-Park) prior to disposal to WENT Landfill as last 	<ul style="list-style-type: none"> • EIAO-TM Annex 7 and Annex 15 • WDO (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. 132) – Public Cleansing and Prevention of Nuisances Regulations 	<ul style="list-style-type: none"> • Not applicable 	<ul style="list-style-type: none"> • Waste reduction should be considered at the planning and design phase, as well as by ensuring the implementation of good site practices; • Carry out on-site sorting to retrieve recyclable materials as much as possible; • Inert construction waste shall not be in liquid form such that it can be contained and delivered by water-tight containers. Inert C&D materials in liquid form shall be solidified before delivering to the public fill reception facilities; • General refuse should be stored in enclosed bins separately from construction and chemical wastes. Recycling bins should also be placed to encourage recycling. Preferably enclosed and covered areas should be provided for general refuse collection and routine cleaning for these areas should also be implemented to keep areas clean. A reputable waste collector should be employed to remove general refuse on a regular basis; and • If chemical wastes are produced at 	<ul style="list-style-type: none"> • No adverse residual impact anticipated

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	resort. <ul style="list-style-type: none"> It is estimated that 170 tons of general refuse would be generated and be recycled for recyclables or disposed of at WENT Landfill. Few hundred litres/kilograms of chemical wastes would be generated per month. It would be collected and disposed of by licensed collector. 			the construction site, the contractors should register with EPD as chemical waste producers. Chemical wastes should be stored in appropriate containers and collected by a licensed chemical waste collector. <ul style="list-style-type: none"> All dump trucks engaged on-site for delivery of inert and non-inert C&D material from the site to the designated disposal location, including PFRFs, landfill etc., should be equipped with Global Positioning System (GPS) or equivalent automatic system for real time tracking and monitoring of their travel routings and parking locations by the Contractor to prohibit illegal dumping and landfilling of materials. The data collected by GPS or equivalent system should be recorded properly for checking and analysis the travel routing and parking locations of dump truck engaged on site by the contractor. 	
Operational Phase					
The waste transportation routes and the waste disposal site, as well as the waste disposal outlet	<ul style="list-style-type: none"> No waste generation is anticipated during operational phase. 	<ul style="list-style-type: none"> Waste Disposal Ordinance (Cap. 354) Waste Disposal (Chemical Waste) (General) Regulation (Cap. 354C) 	<ul style="list-style-type: none"> Not applicable 	<ul style="list-style-type: none"> No mitigation measure is required 	<ul style="list-style-type: none"> No adverse residual impact anticipated
Land Contamination					
Construction workers and future users within the Project	<ul style="list-style-type: none"> No land contamination issues within the assessment area are 	<ul style="list-style-type: none"> EIAO-TM Section 3 (Potential Contaminated Land Issues) of Annex 19 	<ul style="list-style-type: none"> Not applicable 	<ul style="list-style-type: none"> No mitigation measure is required 	<ul style="list-style-type: none"> Not applicable

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	anticipated.	<p>“Guidelines for Assessment of Impact on Sites of Cultural Heritage and Other Impacts”</p> <ul style="list-style-type: none"> Guidance Note for Contaminated Land Assessment and Remediation Guidance Manual for Use of Risk-based Remediation Goals for Contaminated Land Management Practice Guide for Investigation and Remediation of Contaminated Land 			
Ecology					
Construction Phase					
Any areas likely to be impacted by the Project	<ul style="list-style-type: none"> Minor loss of woodland, plantation and developed area, but is not considered significant Disturbance to habitats and associated fauna adjacent to the Project, including dust generation, waste dumping, glare, construction noise, water pollution, etc. 	<ul style="list-style-type: none"> EIAO-TM Annex 8 and Annex 16 	<ul style="list-style-type: none"> Not applicable 	<ul style="list-style-type: none"> Follow good site practices as specified in ProPECC PN 2/23 and standard mitigation measures to control site runoff and other pollutants caused by construction activities Implement mitigation measures regarding dust generation, waste dumping, glare and construction noise Adopt proper grouting and groundwater monitoring measures to minimise impacts to the groundwater table 	<ul style="list-style-type: none"> No adverse residual impact anticipated
Operational Phase					
Any areas likely to be impacted by the Project	<ul style="list-style-type: none"> No direct ecological impact Indirect ecological impact is considered 	<ul style="list-style-type: none"> EIAO-TM Annex 8 and Annex 16 	<ul style="list-style-type: none"> Not applicable 	<ul style="list-style-type: none"> No mitigation measure is required 	<ul style="list-style-type: none"> No adverse residual impact anticipated

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	negligible				
Fisheries					
Construction Phase					
Fisheries resources within 500m assessment area and any other areas likely to be impacted by the Project	<ul style="list-style-type: none"> No direct loss of active fishpond Indirect impact by uncontrolled runoff, dust, silt and chemical waste arising from construction activities 	<ul style="list-style-type: none"> EIAO-TM Annex 9 and Annex 17 	<ul style="list-style-type: none"> Not applicable 	<ul style="list-style-type: none"> Follow good site practices as specified in ProPECC PN 2/23 and standard mitigation measures to control site runoff and other pollutants caused by construction activities Provide temporary traffic arrangements to maintain access to ponds during construction phase, where necessary 	<ul style="list-style-type: none"> No adverse residual impact anticipated
Operational Phase					
Fisheries resources within 500m assessment area and any other areas likely to be impacted by the Project	<ul style="list-style-type: none"> No potential fisheries impact identified 	<ul style="list-style-type: none"> EIAO-TM Annex 9 and Annex 17 	<ul style="list-style-type: none"> Not applicable 	<ul style="list-style-type: none"> No mitigation measure is required 	<ul style="list-style-type: none"> Not applicable
Landscape and Visual Impact					
Construction Phase					
Existing Trees, Landscape Resources (LRs) and Landscape Character Areas (LCAs) and Visually Sensitive Receivers (VSRs)	<ul style="list-style-type: none"> 200-300 nos. of trees (excluding <i>Leucaena leucocephala</i>) would be affected Slightly adverse impact on LR, Woodland / Natural Hillside Plantation Slightly adverse impact on LCA, Upland and Hillside LCA Slightly adverse impact on VSRs including Hikers at Ngau Tam Shan. Hikers at Kai Kung Leng, Fuk Hing Lei and nearby 	<ul style="list-style-type: none"> EIAO (Cap. 499. S16) and EIAO-TM Annexes 3, 10, 11, 18, 20 and 21 EIAO Guidance Note 8/2010 Preparation of Landscape and Visual Impact Assessment Town Planning Ordinance (Cap. 131) HKPSG DEVB TC(W) No. 5/2020 – Registration and Preservation of Old and Valuable Trees DEVB TC(W) No. 4/2020 – Tree Preservation The Forests and 	<ul style="list-style-type: none"> Not applicable 	<ul style="list-style-type: none"> Careful site planning and management Careful design of slope works Tree preservation Tree transplanting / compensatory tree planting Regular inspection of retained trees Minimisation of light impact Reinstatement of temporarily disturbed areas 	<ul style="list-style-type: none"> Insubstantial impacts on all LR and LCAs Insubstantial impact on all VSRs

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	residential developments • Insubstantial impact on all other VSRs • Insubstantial impacts on all other LRs and LCAs	Countryside Ordinance (Cap. 96) – Prohibiting the Felling, Cutting, Burning or Destruction of Tress, Growing Plants and Forests on Government Land			
Operational Phase					
Existing Trees, Landscape Resources (LRs) and Landscape Character Areas (LCAs) and Visually Sensitive Receivers (VSRs)	• Insubstantial impact on all LRs and LCAs • Insubstantial impact on all VSRs	• EIAO (Cap. 499. S16) and EIAO-TM Annexes 3, 10, 11, 18, 20 and 21 • EIAO Guidance Note 8/2010 Preparation of Landscape and Visual Impact Assessment • Town Planning Ordinance (Cap. 131) • HKPSG • DEVB TC(W) No. 5/2020 – Registration and Preservation of Old and Valuable Trees • DEVB TC(W) No. 4/2020 – Tree Preservation • The Forests and Countryside Ordinance (Cap. 96) – Prohibiting the Felling, Cutting, Burning or Destruction of Tress, Growing Plants and Forests on Government Land	• Not applicable	• No mitigation measure is required	• Not applicable

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Cultural Heritage					
Construction Phase					
Terrestrial archaeology and built heritage	<ul style="list-style-type: none"> No adverse impact on the sites of archaeological interest (SAI), Ngau Tam Mei SAI, identified near the Project No direct and indirect impact to the graded historic buildings as well as identified item ,and potential construction vibration is considered minimal 	<ul style="list-style-type: none"> EIAO including EIAO-TM; Antiquities and Monuments Ordinance (Cap. 53); HKPSG; Requirements for Cultural Heritage Impact Assessment from Appendix J of the EIA Study Brief No. ESB-333/2020; and Guidelines for Cultural Heritage Impact Assessment. 	<ul style="list-style-type: none"> Not applicable 	<ul style="list-style-type: none"> No mitigation measure is required Inform AMO immediately when any antiquities or supposed antiquities under the Antiquities and Monuments Ordinance (Cap. 53) are discovered during the course of works as a precautionary measure 	<ul style="list-style-type: none"> No adverse residual impact anticipated
Operational Phase					
Terrestrial archaeology and built heritage	<ul style="list-style-type: none"> Impact to both terrestrial archaeology and built heritage is not anticipated 	<ul style="list-style-type: none"> EIAO including EIAO-TM; Antiquities and Monuments Ordinance (Cap. 53); HKPSG; Requirements for Cultural Heritage Impact Assessment from Appendix J of the EIA Study Brief No. ESB-333/2020; and Guidelines for Cultural Heritage Impact Assessment. 	<ul style="list-style-type: none"> Not applicable 	<ul style="list-style-type: none"> No mitigation measure is required 	<ul style="list-style-type: none"> No adverse residual impact anticipated
Hazard to Life					
Construction Phase					
Population near the Project	<ul style="list-style-type: none"> No hazard-to-life impact would be induced. 	<ul style="list-style-type: none"> EIAO-TM Annex 4; and Dangerous Goods Ordinance (Cap. 295). 	<ul style="list-style-type: none"> Not applicable 	<ul style="list-style-type: none"> No liquid chlorine storage at NTM WTW before the commencement of the construction works of the Project No use of explosives for modification of Chamber G No mitigation measure is required 	<ul style="list-style-type: none"> Not applicable

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Operational Phase					
Population near the Project	<ul style="list-style-type: none"> No hazard-to-life impact would be induced. 	<ul style="list-style-type: none"> EIAO-TM Annex 4; and Dangerous Goods Ordinance (Cap. 295). 	<ul style="list-style-type: none"> Not applicable 	<ul style="list-style-type: none"> No mitigation measure is required 	<ul style="list-style-type: none"> Not applicable