

Appendix 14.1 – Key Assessment Assumptions, Limitations of Assessment Methodologies and Prior Agreements with the Director

Assessment Methodology	Key Assessment Assumptions	Limitations of Assessment Methodologies / Assumptions	Prior Agreements with EPD / Other Authorities	
			EIA Study Brief (ESB-343/2021) Clause Reference	Relevant Documentation
Air Quality Impact				
Construction Phase				
<p>The air quality impact assessment follows: Annexes 4 and 12 of the EIAO-TM and requirement from the EIA Study Brief (ESB-343/2021).</p> <p>Qualitative assessment was carried out for air quality impact during construction phase.</p>	<p>The construction work would be of small-scale and confirmed within small work area, and that construction activities will not take place at the entire construction work site at the same time, but to be undertaken at multiple work fronts at different construction periods. The construction activities at different work fronts would not take place concurrently.</p>	N/A	N/A	N/A
Operational Phase				
<p>The air quality impact assessment follows: Annexes 4 and 12 of the EIAO-TM and requirement from the EIA study. Brief (ESB-343/2021) and the new AQOs.</p> <p>Quantitative assessment was carried out by applying EMFAC-HK (V4.3), AERMOD and</p>	<p><u>Emission from Open Road Traffic</u></p> <ul style="list-style-type: none"> Traffic flow and vehicle compositions reported in the Traffic Impact Assessment was adopted Vehicular emissions from open road was based on modeling results of EMFAC-HK v4.3 and the air quality impact was predicted using CALINE4 model. <p><u>Emission from Bus, Minibus and Coach Terminuses</u></p> <ul style="list-style-type: none"> Start and Idling emissions were calculated and modelled with reference to Calculation of Start Emissions in Air Quality Impact Assessment published by EPD and Road Tunnels: Vehicle 	Adopted background concentration at	Clause 5 of Appendix B	<ul style="list-style-type: none"> Methodology Paper on Air Quality Impact Assessment Methodology on Assessing the Percentage of Newly Registered Electric Private Cars in Assessment Year 2033 Methodology on Emission

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	<p>Emissions and Air Demand for Ventilation published by World Road Association.</p> <ul style="list-style-type: none"> The air quality was predicted by using AERMOD model. <p><u>Emissions from Existing Chimneys within the 500m study area and Other Major Sources within 4km</u></p> <ul style="list-style-type: none"> Chimney parameters such as stack height, stack temperature, stack exit velocity, stack diameter and locations were taken from either the management office/tenant's response or the approved EIA report of Tsuen Wan Bypass, Widening of Tsuen Wan Road between Tsuen Tsing Interchange and Kwai Tsing Interchanges and Associated Junction Improvement Works (AEIAR-124/2008). The parameters and emission data from other major sources within 4km were taken from the Specified Processes Licenses. The air quality was predicted by using AERMOD model. <p><u>Marine Emissions</u></p> <ul style="list-style-type: none"> Marine emissions were estimated with reference to the Study on Marine Vessels Emission Inventory (MVEIS) by HKUST. The predicted air quality impact was predicted using AERMOD model. 			<p>Adjustment of PATH v2.1 Model for the Assessment Year 2033</p> <ul style="list-style-type: none"> Methodology Paper on Cold Start Emission Assessment

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	<p><u>Background Concentration</u></p> <ul style="list-style-type: none"> • PATH background concentration at year 2025 was adopted. • Vehicular emissions for the grids within study areas were removed from the emission inventory of PATH V2.1 model to avoid double counting. • Vehicular emissions for the remaining grids from the emission inventory of PATH V2.1 model were projected to Year 2033. 			

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Noise Impact				
Construction Phase				
<p>The noise impact assessment follows: Annexes 5 and 13 of the EIAO-TM and requirement from the EIA Study Brief (ESB-343/2021).</p> <p>Quantitative assessment was carried out for noise impact during construction phase.</p>	<ul style="list-style-type: none"> The construction noise was predicted based on standard acoustic principles. Sound Power Levels (SWLs) of powered mechanical equipment (PME) were taken from Table 3 of the GW-TM, "Sound power levels of other commonly used PME" (Other PME) published by EPD and database of Quality powered mechanical equipment on EPD's website. 	<ul style="list-style-type: none"> The prediction of construction noise impact was based on the procedures in GW-TM under the NCO. The programme and plant inventory for proposed construction works adopted in the assessment might vary in future. 	<p>Clause 2.2.1(a), 2.2.1(c) and 2.3.1 of Appendix C.</p>	<p>Agreement letters on the assessment area, NAPs and construction programme.</p>
Operational Phase				
<p>The noise impact assessment follows: Annexes 5 and 13 of the EIAO-TM and requirement from the EIA Study Brief (ESB-343/2021).</p> <p>Quantitative assessment was carried out with NoiseMap Enterprise – RoadNoise model for road traffic noise impact during operation phase.</p>	<ul style="list-style-type: none"> Road traffic noise was predicted based on the traffic forecast, following strictly the procedures stipulated in the "Calculation of Road Traffic Noise (CRTN)" (1988) published by Department of Transport, UK. Road traffic noise was presented in terms of noise levels exceeded for 10% of the one-hour period. having the peak traffic flow (i.e. L_{10, 1hour}, dB(A)). The assessment year was determined on the basis of peak hour traffic flow projected within a period of 15 years following commencement of operation of the Project. 	<p>N/A</p>	<p>Clause 3.2.1(a), 3.2.1(c) and 3.2.2 (a) of Appendix C.</p>	<p>Agreement letters on the assessment area, NAPs and road extent.</p>

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Water Quality Impact				
<p>The water quality impact assessment follows: Annexes 6 and 14 of the EIAO-TM and requirement from the EIA Study Brief (ESB-343/2021).</p> <p>Qualitative assessment was conducted for the water quality impact during both construction and operation phases. The water pollution to be generated during both construction and operation phases were identified. The amount of water pollution generated during operation phase was quantified. Mitigation measures are recommended for the identified source of water pollution to minimize the potential water quality impacts.</p>	<ul style="list-style-type: none"> The types and quantities of water pollution to be generated from the Project are based on the Project design and / or engineering assessments. 	N/A	Appendix D	N/A
Waste Management Implications				
<p>The waste management implication assessment for the Project follows: Annexes 7 and 15 of the EIAO-TM as well as the requirements given in EIA Study Brief (No. ESB-343/2021).</p>	<ul style="list-style-type: none"> The waste quantities to be generated from the Project were estimated based on engineering assessment. 	N/A	N/A	N/A

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Land Contamination				
<p>The land contamination assessment for the Project follows:</p> <ul style="list-style-type: none"> Annex 19 of the EIAO-TM and the requirements given in EIA Study Brief (No. ESB-343/2021); Guidance Note for Contaminated Land Assessment and Remediation (EPD, 2007); Practice Guide for Investigation and Remediation of Contaminated Land (EPD, 2011); and Guidance Manual for Use of Risk-based Remediation Goals for Contaminated Land Management (EPD, 2007). <p>The methodology includes desktop review and site walkover.</p>	<p>The assessment was undertaken based on findings of the relevant EIA studies, historical land use and site reconnaissance.</p>	N/A	N/A	N/A
Landfill Gas Hazard				
<p>Landfill Gas Hazard Assessment follows Annexes 7 and 19 of the Technical Memorandum of the EIAO-TM and requirement from the EIA Study Brief (ESB-343/2021).</p> <ul style="list-style-type: none"> ProPECC PN 3/96 – This Practice Note provide specific guidance 	<p>The assessment was undertaken with reference to findings of relevant EIA studies and using the most recent landfill gas monitoring data (to June 2022). The assessment procedure is based on the "Source - Pathway - Target" model stated in Chapter 3 of EPD/TR8/97.</p>	N/A	N/A	N/A

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relating to Landfill Gas Hazard Assessment for Development Adjacent to Landfill <ul style="list-style-type: none"> • EPD/TR8/97 – Landfill Gas Hazard Assessment Guidance Note provides the risk assessment framework to be followed for assessment of risk. 				
Impact on Cultural Heritage				
The cultural heritage assessment follows: <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) • Guidance Note on Assessment of Impact on Sites of Cultural Heritage in Environmental Impact Assessment Studies • Hong Kong Planning Standards and Guidelines (HKPSG) • Guidelines for Cultural Heritage Impact Assessment (CHIA) 	The assessment was undertaken based on the assessment methodology covering built heritage resources and potential archaeological resources within the assessment area.	N/A	N/A	N/A

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Landscape and Visual Impacts				
The landscape impact and visual impact of the Project follows: Annexes 10 and 18 of the EIAO-TM as well as the requirements given in EIA Study Brief (No. ESB-343/2021).	Landscape and visual impact assessment was carried out based on the project description provided in Section 2 of the EIA Report.	N/A	Clause 3.4.11	N/A