Appendix 13.1 – 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-315/2019) Clause Reference	Relevant Documentation
Air Quality Impact				
Construction Phase				
The air quality impact assessment follows: Annexes 4 and 12 of the EIAO-TM and requirement from the EIA Study Brief (ESB-315/2019). Quantitative assessment was carried out for air quality impact during construction phase.	• Based on current tentative construction programme, the worst-case for construction dust assessment has been identified. Both short-term and long-term impacts were accessed with conservative approach by assuming 100% active construction area for all work sites, construction working period of 30 days a month and 12 hours a day was assumed. • The prediction of dust emission is based on the typical values and emission factors obtained from United States Environmental Protection Agency (USEPA) Compilation of Air Pollution Emission Factors, AP-42, 5th Edition. • Watering once per hour on exposed worksites is proposed to achieve dust removal efficiency of 91.7% in accordance with the "Control of Open Fugitive Dust Sources" (USEPA AP-42).	The construction programme is indicative and subject to contractors' actual operation. A conservative approach, assuming 100% active area at all working sites and all works sites being active concurrently, was adopted in the model run. The actual situation may be better than that of the model prediction.	N/A	N/A
Operational Phase				
The air quality impact assessment follows: Annexes 4 and 12 of the EIAO-TM and requirement from the EIA Study Brief (ESB-315/2019).	<u>Emission from Open Road Traffic</u> • Traffic flow and vehicle compositions reported in the Traffic Impact Assessment was adopted	• Adopted background concentration at year 2020 may overestimate air quality in the commencing year, 2028.	N/A	N/A

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			EIA Study Brief (ESB-315/2019) Clause Reference	Relevant Documentation
Quantitative assessment was carried out by applying EMFAC-HK, AERMOD and CALINE4 model.	• Vehicular emissions from open road was based on modeling results of EMFAC-HK v4.2 and the air quality impact was predicted using CALINE4 model. <u>Emission from Portals, Underpass Top Openings and Ventilation Exhausts</u> • Calculations of emissions were referenced to the supporting documents for the approved VEP (EP-453/2013/B) of West Kowloon Cultural District EIA. <u>Emission from Bus, Minibus and Coach Terminuses</u> • 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 Emissions and Air Demand for Ventilation published by World Road Association. <u>Background Concentration</u> • PATH background concentration at year 2020 was adopted. • Vehicular emissions were removed from the emission inventory of PATH-2016 model to avoid double counting.			

Assessment Methodology	Key Assessment Assumptions	Limitations of Assessment Methodologies / Assumptions	Prior Agreements with EPD / Other Authorities	
			EIA Study Brief (ESB-316/2019) Clause Reference	Relevant Documentation
Noise Impact				
Construction Phase				
The noise impact assessment follows: Annexes 5 and 13 of the EIAO-TM and requirement from the EIA Study Brief (ESB-315/2019). Quantitative assessment was carried out for noise impact during construction phase.	• 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. .	• 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.	Clause 2.2.1 (a), 2.2.1 (c) and 2.3.1 of Appendix C	Agreement letters on the assessment area, NAPS and construction programme.
Operational Phase				
The noise impact assessment follows: Annexes 5 and 13 of the EIAO-TM and requirement from the EIA Study Brief (ESB-315/2019). Quantitative assessment was carried out with NoiseMap Enterprise - RoadNoise model for road traffic noise impact during operation phase.	• 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. L10, 1 hour, 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.	N/A	Clause 3.2.1 (a), 3.2.1 (c) and 3.2.2 (a) of Appendix C	Agreement letters on the assessment area, NAPS and road extent.

Assessment Methodology	Key Assessment Assumptions	Limitations of Assessment Methodologies / Assumptions	Prior Agreements with EPD / Other Authorities	
			EIA Study Brief (ESB-316/2019) Clause Reference	Relevant Documentation
Water Quality Impact				
The water quality impact assessment follows: Annexes 6 and 14 of the EIAO-TM and requirement from the EIA Study Brief (ESB-315/2019). 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.	• 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				
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-315/2019).	• The waste quantities to be generated from the Project were estimated based on engineering assessment.	N/A	N/A	N/A

Assessment Methodology	Key Assessment Assumptions	Limitations of Assessment Methodologies / Assumptions	Prior Agreements with EPD / Other Authorities	
			EIA Study Brief (ESB-316/2019) Clause Reference	Relevant Documentation
Land Contamination				
The land contamination assessment for the Project follows: Annex 19 of the EIAO-TM, requirements given in EIA Study Brief (No. ESB-315/2019) as well as the following: • Guidance Note for Contaminated Land Assessment and Remediation (EPD, 2007) • Practice Guide for Investigation and Remediation of Contaminated Land (EPD, 2011) • Guidance Manual for Use of Risk-based Remediation Goals for Contaminated Land Management (EPD, 2007). • The methodology includes desktop study and site survey.	• The assessment was undertaken based on historical land use and site reconnaissance.	N/A	N/A	N/A
Ecological Impact (Terrestrial)				
The ecological impact assessment follows: Annexes 8 and 16 of the EIAO-TM, EIAO Guidance Note No. 3/2010, No. 6/2010, No. 7/2010 and No. 10/2010, as well as the requirements given in EIA Study Brief (No. ESB-315/2019)	• The assessment was undertaken based on the results of literature review and ecological field surveys.	N/A	Clause 3.4.9 and Appendix G	Working Paper on Methodology of Ecological Impact Assessment

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			EIA Study Brief (ESB-316/2019) Clause Reference	Relevant Documentation
Impact on Cultural Heritage				
The cultural heritage assessment follows: Annexes 10 and 19 of the EIAO-TM, Guidelines for Cultural Heritage Impact Assessment, as well as the requirements given in the EIA Study Brief (No. ESB-315/2019).	• 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
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-315/2019).	• Landscape and Visual Impact Assessment was carried out based on the project description provided in Section2 of the EIA Report	N/A	N/A	N/A