



Appendix 13A

Key Assessment Assumptions and Limitations of Methodologies



Appendix 13A Key Assessment Assumptions, Limitations of Assessment Methodologies and Related Prior Agreements

Assessment Methodologies	Key Assessment Assumptions	Limitations of Assessment Methodologies / Assumptions	Prior Agreements with EPD in accordance with EIA Study Brief (No. ESB-365/2024)		Proposed Alternative Assessment Tools / Assumptions (if applicable)
			EIA Study Brief Clause Reference	Relevant Documentation	
Air Quality Impact					
<p><u>Construction Phase</u> The air quality impact assessment for the Project follows Annex 4 and Annex 12 of the Technical Memorandum on Environmental Impact Assessment (TM-EIAO) and EIA Study Brief No. ESB-365/2024. The key air quality concern during the construction phase would be the dust emissions. Qualitative assessment was conducted for the assessment of the construction air quality impacts. Mitigation measures were recommended to address the potential impacts.</p>	<p>Assumptions on construction activities were based on the reference design of the Project.</p>	<p>Details of the construction activities are subject to contractors' actual operation.</p>	N/A	N/A	N/A
<p><u>Operational Phase</u> The air quality impact assessment for the Project follows Annex 4 and Annex 12 of the TM-EIAO and EIA Study Brief No. ESB-365/2024. Mathematical modelling was performed to simulate the emissions from I-PARK2 together with other concurrent emissions within 500 m from the Project boundary and within the Areas of Influence (AOIs). A three-tier approach recommended in the EPD's Guidelines on Assessing the 'Total' Air Quality Impacts was followed to assess the potential cumulative air quality impacts.</p>	<p><u>Emissions of I-PARK2</u> The stack parameters, vehicular and marine emissions associated with the I-PARK2 operation were based on the reference design information of the Project. The stack emissions limits of I-PARK2 were developed by making reference to the standards for pollution control on the MSW incineration in the Mainland China (GB 18485-2014) and Shenzhen (SZDB/Z 233-2017), the best available techniques (BAT) reference document for waste incineration in the European Union (EU), as well as the prevailing guidance note on the best practicable means (BPM) for incinerators (municipal waste incineration) in Hong Kong.</p> <p><u>Concurrent Emissions and Background Concentrations</u> Concurrent emissions in the assessment area were established from best available information (e.g. relevant Specified Processes (SP) licenses and approved EIA reports).</p>	<p>The air emission inventory was derived from best available information at the time of the I-PARK2 EIA. Conservative assessment assumptions were adopted whenever possible to avoid under-estimation of the emission impact.</p>	<p>Clauses 3.4.3.2, 2(ii), 4(i), 5(i), 5(iv) and 5(vi) of Appendix B</p>	<p>Prior agreement on extension of assessment area to cover the affected zone of air pollution impact due to stack emissions of the Project, target emission levels for the incinerator and specific modeling details was sought through the submission of draft Air Quality Impact Assessment to EPD and submission of traffic forecast methodology for air quality impact assessment to the Transport Department prior to formal submission of the EIA Report.</p>	N/A
Noise Impact					
<p>The noise impact assessment for the Project follows Annex 5 and Annex 13 of the EIAO-TM, the requirement in the EIA Study Brief No. ESB-365/2024. The potential noise sources of the Project have been identified and their</p>	<p>No Noise Sensitive Receiver (NSR) was identified within 300m from the Project site based on the review of relevant desktop information. Site survey has also been conducted to confirm the findings of desktop review.</p>	<p>Details of the Project are subject to future design of I-PARK2 contractor</p>	<p>Clause 3.4.4 and Appendix C</p>	<p>Prior agreement on the assessment area, NSR and methodology has</p>	N/A



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impacts have been qualitatively assessed.				been sought from EPD through the submission of draft Noise Impact Assessment to EPD prior to formal submission of the EIA Report.	
Water Quality Impact					
<p>The water quality impact assessment for the Project follows Annexes 6 and 14 of the EIAO-TM as well as the requirements given in EIA Study Brief No. ESB-365/2024.</p> <p>To assess the potential water quality impacts of I-PARK2, the sources and natures of water pollution to be generated from the Project have been identified and mitigation measures have been proposed to minimize the impacts.</p> <p>Impacts due to marine construction works and operational phase discharges of the Project were predicted by mathematical modelling.</p> <p>Qualitative assessment was conducted for other operational activities and the land-based construction works.</p>	<p>Discharges from the construction and operational activities of I-PARK2 were based on the reference design of the Project.</p> <p>The background discharges from other concurrent projects in the assessment area were compiled from the information provided by their operators or in the Water Pollution Control Ordinance (WPCO) discharge licenses.</p> <p>The models adopted including their setup and parameters were fully calibrated and verified against field data.</p> <p>Coastline configurations were based on available information from existing and planned coastal development projects.</p>	<p>The pollution loading inventory was derived based on best available information at the time of the I-PARK2 EIA.</p> <p>Conservative assessment assumptions (e.g. using the maximum design limit for continuous discharge) were adopted whenever possible to address the uncertainty.</p>	Appendix D and Appendix D-1	Prior agreement on the water quality impact assessment methodology was sought via the submission of draft Water Quality Impact Assessment to EPD prior to formal submission of the EIA Report.	N/A
Waste Management Implications					
<p>The assessment of waste management implications for the Project follows Annexes 7 and 15 of the EIAO-TM as well as the requirements given in EIA Study Brief No. ESB-365/2024.</p>	<p>The waste quantities to be generated from the Project during construction and operational phases were estimated based on reference design.</p> <p>Non-dredged ground treatment method (i.e. DCM) is proposed for construction of berthing facilities and seawall modification.</p> <p>Maintenance dredging of the existing marine route to facilitate navigation of waste delivery vessels to and from the proposed berthing facility may be required on an as-needed basis subject to the seabed level, which would be similar to the current operation associated with the WENT Landfill. Since the maintenance dredging work is an existing operation, additional maintenance dredging during the I-PARK2 operation would not be anticipated. For maintenance dredging of the existing marine route, the responsible contractors will be required to follow the requirements under the Dumping at Sea Ordinance (Cap. 466) and the framework for the management of dredged / excavated sediment in Chapter 4 of the Project Administration Handbook for Civil Engineering Works [subsumed from ETWB TC(W) No. 34/2002] as appropriate when applying for and scheduling maintenance dredging activities.</p>	<p>Waste quantities and detailed waste management measures are subject to the Environmental Management Plan and Project design to be developed by the I-PARK2 Contractor.</p>	N/A (No dredging will be involved for construction of this Project. Clause 5 of Appendix E is not applicable under this Project.)	Confirmation with EPD was sought that prior agreement under Clause 5 of Appendix E is not required as no dredging will be involved for construction of the Project.	N/A



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Ecological Impact					
The ecological impact assessment for the Project follows Annexes 8 and 16 of the EIAO-TM, and the requirements of the EIA Study Brief (No. ESB-365/2024) and EIAO Guidance Notes GN 6/2010, 7/2023, 10/2023 and 11/2023.	The assessment and evaluation of ecological impact was undertaken based on the results of literature review, ecological field survey and the reference design of the Project. The marine ecological impact assessment was also based on the water quality impact assessment results.	Details of the Project are subject to future design of I-PARK2 Contractor	N/A	Prior agreement on the ecological survey methodology was sought via the submission of Ecological Survey Methodology Paper.	N/A
Fisheries Impact					
The fisheries impact assessment for the Project follows Annexes 9 and 17 of the EIAO-TM as well as the requirements given in EIA Study Brief No. ESB-365/2024.	<p>The proposed extent of oyster culture activities is based on existing information including:</p> <ul style="list-style-type: none"> (i) Mariculture Subzone delineated in the Deep Bay Water Control Zone; (ii) Area of Oyster Production as shown in Marine Water Quality in Hong Kong in 2022⁵; and (iii) Available information on oyster rafts from AFCD's survey in 2023. <p>Taking into account the available information in (iii) above and the subsequent measures being taken by the Government's inter-departmental working group responsible for tackling management issues of oyster rafts in Deep Bay to step up the management of oyster culture activities in the area, the area granted or to be granted for operation of oyster rafts has been considered in the proposed extent of oyster culture activities in Deep Bay, with observation points proposed to cover the extent of oyster culture activities in Deep Bay outside the Mariculture Subzone in (i) and Area of Oyster Production in (ii).</p> <p>The assessment and evaluation of fisheries impact was undertaken based on the results of literature review, the reference design of the Project and the water quality impact assessment results.</p>	Details of the Project are subject to future design of I-PARK2 Contractor	Clause 3.4.8.2	Prior agreement on the extent of oyster culture activities in Deep Bay to be covered in the assessment was sought via submission of the proposed extent of oyster culture activities for fisheries impact assessment.	N/A
Visual Impact					
The visual impact assessment follows Annexes 10 and 18 of the EIAO-TM, EIAO Guidance Note No. 8/2023 as well as the requirements given in EIA Study Brief No. ESB-365/2024.	Geographical Information System (GIS) software, the study of aerial maps and site visits were utilized to prepare the visual envelope. Impact assessment was conducted with reference to the reference design of the Project.	Details of the Project (e.g. building appearances) are subject to future design of the I-PARK2 Contractor.	Appendix H	Prior agreement on the visual impact assessment methodology including selection of representative public viewing	N/A

⁵ Marine Water Quality in Hong Kong in 2022 (EPD, 2022) - <https://www.epd.gov.hk/epd/sites/default/files/epd/english/environmentinhk/water/hkwqrc/files/waterquality/annual-report/marinereport2022.pdf>



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				points was sought via the submission of draft Visual Impact Assessment to EPD prior to formal submission of the EIA Report.	
Health Impact					
The health impact assessment for the Project follows the requirements given in the EIA Study Brief No. ESB-365/2024. Literature review was conducted to establish the relevant practices, standards and guidelines. The potential sources and compounds of potential concern (COPCs) of health impact have been identified. Health risk assessment was performed and mitigation measures were recommended to minimize the impacts	The assessment of aerial emission was conducted based on the reference design and target air emission levels for I-PARK2 and the maximum emission rates for similar operations from literature.	The air emission inventory was derived from best available information at the time of the I-PARK2 EIA. Conservative assessment assumptions were adopted whenever possible to avoid under-estimation of the emission impact.	Clause 2 of Appendix I	Prior agreement on approach for health risk assessment was sought via the submission of draft Health Impact Assessment prior to formal submission of the EIA report.	N/A
Landfill Gas Hazard					
The landfill gas hazard assessment follows Annexes 7 and 19 of the EIAO-TM, Landfill Gas Hazard Assessment Guidance Note (1997) (EPD/TR8/97) as well as the requirements given in EIA Study Brief No. ESB-365/2024.	The Landfill Gas (LFG) hazard was based on the design information of the planned West New Territories Landfill Extension. The targets of LFG hazard were determined based on the scope of this Project.	Details of the Project are subject to future design of I.PARK2 Contractor	N/A	N/A	N/A

Note: N/A - Not applicable