

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-313/2019) 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-313/2019), and the new AQOs.</p> <p>Quantitative assessment was carried out for air quality impact during construction phase.</p> | <p><u>Emission from Construction Activities</u></p> <ul style="list-style-type: none"> The construction work areas were assumed to be working in full capacity occupying the whole project area and to be conducted simultaneously during the construction period. <p><u>Background Concentration</u></p> <ul style="list-style-type: none"> PATH background concentration at year 2025 was adopted. | <ul style="list-style-type: none"> The construction activities will not be taken place at the entire work site concurrently, rather at different construction periods, of smaller scales and confined within small work areas. | 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-313/2019), and the new AQOs.</p> <p>Quantitative assessment was carried out by applying EMFAC-HK (v4.3), AERMOD and CALINE4 model.</p> | <p><u>Emission from CHP and Boilers</u></p> <ul style="list-style-type: none"> The emission rate and design of CHP and boiler refer to the latest engineering design at the time of the assessment. <p><u>Cumulative Emission from Open Road Traffic</u></p> <ul style="list-style-type: none"> Traffic flow and vehicle compositions in 24-hour profile reported in the Traffic Impact Assessment which has been agreed with Transport Department was adopted. Vehicular emissions from open road was based on modelling results of EMFAC-HK v4.3 and the air quality impact was predicted using CALINE4 model. <p><u>Start Emission</u></p> <ul style="list-style-type: none"> Start emission was estimated in broad-brush approach, i.e. all vehicle classes to have potential trip start on local road. Start emission factor were extracted from EMFAC-HK v4.3. Highest start emission factor was adopted for a vehicle class, irrelevant to its soak time. <p><u>Background Concentration</u></p> <ul style="list-style-type: none"> PATH background concentration at year 2025 was adopted. <p><u>Emission from Deodorizers (DOs)</u></p> <ul style="list-style-type: none"> The odour emission rate and design of DOs refer to the latest engineering design at the time of assessment. <p><u>Cumulative Emission from Existing Chicken Farm</u></p> <ul style="list-style-type: none"> Odour emission rate and emission parameters refer to the approved YLS DA EIA (AEIAR-215/2017) | <ul style="list-style-type: none"> A 24-hour profile of traffic data was assumed for the whole year. No daily variation was considered. Start emission would be overestimated on local roads. Background concentration at Year 2025 may overestimate air quality in the future Year 2032. | N/A | N/A |
| 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-313/2019).</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 or the Quality Powered Mechanical Equipment (QPME) System available at EPD's website or previous approved EIA reports. PME were assumed to be located at the notional source of works sites. | <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. | Clause 2.2.1 (a), 2.2.1 (c) and 2.3.1, of Appendix C | Working Paper on Noise Impact Assessment agreed on Oct 2021 |

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| | <ul style="list-style-type: none"> Adoption of movable noise barriers would provide a noise reduction of 5 dB(A); Use of noise insulating fabric would provides a noise reduction of 10 dB(A); Use of noise enclosure would provide a noise reduction of 15 dB(A). | | | |
| Operational Phase | | | | |
| The noise impact assessment follows: Annexes 5 and 13 of the EIAO-TM and requirement from the EIA Study Brief (ESB-313/2019). | <ul style="list-style-type: none"> Fixed noise was predicted based on the sound power level provided by project engineer, standard acoustic principle and the procedures in the IND-TM under the NCO. The inventory and SWLs of the noise sources were referenced from approved Project Profile / EIAs and confirmed by Project Proponent and Project Engineer. SWLs for some noise sources to be specified in construction contract. Prevailing background noise surveys were conducted to determine the standards for evaluating fixed noise impact. Worst operation mode confirmed by Project Proponent and Project Engineer was assessed to represent the maximum noise emission. | <ul style="list-style-type: none"> Location of planned fixed plant noise sources and their SWLs may be varied in the detailed design stage. | Clause 3.2.1(a), 3.2.1 (c), 3.2.2(c), 3.3.1(a)(ii) and 3.3.1(b) of Appendix C | Working Paper on Noise Impact Assessment agreed on Oct 2021 |
| Water Quality Impact | | | | |
| Construction Phase | | | | |
| The water quality impact assessment follows: Annexes 6 and 14 of the EIAO-TM and requirement from the EIA Study Brief (ESB-313/2019). Qualitative assessment was conducted for the water quality impact during construction phase. The water pollution to be generated during construction phase was identified. Mitigation measures are recommended for the identified source of water pollution to minimize the potential water quality impacts. | <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 | N/A | N/A |
| Operation Phase | | | | |
| Assessment in accordance with Appendix D of EIA Study Brief No. ESB-313/2019 and Annex 6 and 14 of the EIAO-TM Change in water quality due to the proposed effluent discharge from YLSEPP has been identified and quantitatively assessed by using Delft3D model. Mitigation measures are recommended for the identified source of water pollution to minimize the potential water quality impacts. | <ul style="list-style-type: none"> Coastline configuration for water quality assessment is based on the committed / on-going / planned coastal developments. The effluent flow and qualities of the YLSEPP is based on the engineering design. | N/A | Appendix D-1 | Working Paper on Water Quality Impact Assessment |
| 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-313/2019). | <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 |
| Land Contamination | | | | |
| The land contamination assessment for the Project follows: <ul style="list-style-type: none"> Annex 19 of the EIAO-TM and the requirements given in EIA Study Brief (No. ESB-313/2019) | The assessment was undertaken based on relevant findings of the YLS EIA Study, historical land use and site reconnaissance. | Similar to the recommendation in the YLS EIA Study, as the potentially contaminated sites were inaccessible and still in operation, and | N/A | N/A |

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| <ul style="list-style-type: none"> 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 study, site survey, formulation of soil and groundwater sampling and testing strategy and recommendation of further works.</p> | | <p>there could be changes in site operation or changes in land use within the proposed YLSEPP site prior to development which may cause potential land contamination issues, site re-appraisal for the potentially contaminated sites within the proposed YLSEPP site should be conducted once site access is available (e.g. after land resumption) in order to identify the need for SI for any additional hotspots as a result of on-going land contaminating activities. In addition, re-appraisal would be required for the other remaining areas of the proposed YLSEPP site to assess the latest site situation in order to address any change in land use that may give rise to potential land contamination issues. The further works including site re-appraisal for the whole proposed YLSEPP site, associated SI works, any necessary remediation works and submission of supplementary CAP / CAR / RAP / RR are recommended to be carried out when site access is available (e.g. after land</p> <p>construction or development works at the identified contaminated sites.</p> | | |
| Ecological Impact | | | | |
| <p>The ecological impact assessment follows:</p> <p>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-313/2019)</p> | <ul style="list-style-type: none"> The assessment was undertaken based on the results of literature review and ecological field surveys. Impact assessment was conducted based on the proposed RODP and works programme for YLS DA, in which the Project site would have been formed and converted entirely into developed land under the YLS DA project, prior to the commencement of the construction for YLS EPP. | <ul style="list-style-type: none"> Value and impact evaluation for the proposed clean-up reedbed adjacent to YLS EPP was not plausible given that the design and works programme for the reedbed is still under development. | Clause 3.4.9 and Appendix G | Methodology Paper on Ecological Surveys for Ecological Impact Assessment agreed on 2021.01.12 |
| Landscape and Visual Impacts | | | | |
| <p>The Landscape Impact and Visual Impact of the Project follows:</p> <ul style="list-style-type: none"> Annexes 10 and 18 of the EIAO-TM as well as the requirements given in EIA Study Brief (No. ESB-323/2019). EIAO Guidance Note No. 8/2010 for general guidelines for preparation of landscape and visual impact assessment | <ul style="list-style-type: none"> Landscape and Visual Impact Assessment was carried out based on the project description provided in Section 2 of the EIA Report The tree survey was undertaken in accordance with Clause 2 of Appendix I of the EIA Study Brief. | N/A | N/A | N/A |
| Hazard to Life | | | | |
| <p>The Hazard to Life assessment follows:</p> <p>Annex 4 of the EIAO-TM as well as the requirements given in EIA Study Brief (No. ESB-313/2019).</p> | <ul style="list-style-type: none"> Hazard to life assessment was carried out to evaluate the risks associated with the biogas facilities to the existing, committed and planned off-site population due to operation of the organic wastes co-digestion facility at the proposed YLSEPP. The operation details of the biogas facilities were based on the engineering design of the proposed YLSEPP. Off-site population in the YLS Stage 3 development were estimated based on the latest information provided by CEDD. PhastRisk 6.7 was adopted for the quantitative assessment. | N/A | Clause 3.4.11 and Appendix I | N/A |