

## Checklist for EIA Study Brief (ESB-302/2017)

| Section no. of the EIA Study Brief | Specific Requirements  | Compliance Check  |
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| 1                                  | BACKGROUND   |   |
| 1.1                                | An application (No. ESB-302/2017) for an Environmental Impact Assessment (EIA) study brief under Section 5(1)(a) of the Environmental Impact Assessment Ordinance (EIAO) was submitted by the captioned Applicant on 30 August 2017 with a Project profile (No. PP-556/2017) (the Project Profile).  | The process of the study brief application is described in Section 1.1.4.   |
| S1.2                               | The Applicant proposes to construct a bonded vehicular bridge of about 360 m connecting the Hong Kong International Airport (HKIA) and the Hong Kong-Zhuhai-Macao Bridge (HZMB) Hong Kong Boundary Crossing Facilities (HKBCF) island, with several supporting piers in between. The location of the Project as given in the Project Profile is reproduced in <u>Appendix A</u> of this EIA Study Brief (SB).  | The nature and scope of the project are presented in Sections 1.1.1 to 1.1.3 of the EIA report, while the design of the Project is presented in Section 2.2.                    |
| S1.3                               | Based on the information provided in the Project Profile, the works identified as Designated Projects in Part I, Schedule 2 of the EIAO, are mainly listed as follows:<br>(i) "A road bridge more than 100 m in length between abutments" (Item A.8);<br>(ii) "Reclamation works resulting in 5% decrease in cross sectional area calculated on the basis of 0.0 mPD in a sea channel" (Item C.3(a))<br>More items under Schedule 2 of the EIAO may be identified during the course of this EIA study.   | The designated projects under this project is presented in Section 1.2.1. No more items under Schedule 2 of the EIAO was identified during the course of this EIA study.        |
| S1.4                               | Pursuant to section 5(7)(a) of the EIAO, the Director of Environmental Protection (the Director) issues this SB to the Applicant to carry out an EIA study.  | The process of the study brief application is described in Section 1.1.4. The EIA has been carried out in accordance with the Study Brief and compliance is demonstrated below. |
| S1.5                               | The purpose of this EIA study is to provide information on the nature and extent of environmental impacts arising from the construction and operation of the Project and associated works that will take place concurrently. This information will contribute to decisions by the Director on:<br>(i) the overall acceptability of any adverse environmental consequences that are likely to arise as a result of the Project;<br>(ii) the conditions and requirements for the detailed design, construction and operation of the Project to mitigate against adverse environmental consequences where practicable; and<br>(iii) the acceptability of residual impacts after the proposed mitigation measures are implemented. | Noted. The purpose of the EIA Report is described in Section 1.3.1.   |
| 2                                  | OBJECTIVES OF THE EIA STUDY  |   |
| 2.1                                | The objectives of the EIA study are as follows:<br>(i) to describe the Project and associated works together with the requirements and environmental benefits for carrying out the proposed project;<br>(ii) to identify and describe the elements of the community and environment likely to be affected by the Project and/or likely to cause adverse impacts to the Project, including natural and man-made environment and the associated environmental constraints;<br>(iii) to provide information on the consideration of alternative   | Noted. The objectives of the EIA Study Brief are presented in Section 1.3.2.  |

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|                                    | <p>design options of the Project including scale, extent, layout, configuration, design and type of design orientation and the construction methods with a view to avoiding and minimising potential environmental impacts to environmentally sensitive areas and sensitive uses; to compare the environmental benefits and dis-benefits of different options; to provide reasons for selecting the preferred option(s) and to describe the part environmental factors played in the selection of preferred option(s);</p> <p>(iv) to identify and quantify emission sources (including air quality, noise, water quality and waste, etc. as appropriate) and determine the significance of impacts on sensitive receivers and potential affected uses;</p> <p>(v) to identify and quantify any potential losses or damage to flora, fauna and natural habitats and to propose measures to mitigate these impacts;</p> <p>(vi) to identify any potential landscape and visual impacts and to propose measures to mitigate these impacts;</p> <p>(vii) to propose the provision of infrastructure or mitigation measures so as to minimise pollution, environmental disturbance and nuisance during construction and operation of the Project;</p> <p>(viii) to investigate the feasibility, effectiveness and implications of the proposed mitigation measures;</p> <p>(ix) to identify, predict and evaluate the residual (i.e. after practicable mitigation) environmental impacts and the cumulative effects expected to arise during the construction and operation phases of the Project in relation to the sensitive receivers and potential affected uses;</p> <p>(x) to identify, assess and specify methods, measures and standards, to be included in the detailed design, construction and operation of the Project which are necessary to mitigate these residual environmental impacts and cumulative effects and reduce them to acceptable levels;</p> <p>(xi) to investigate the extent of the secondary environmental impacts that may arise from the proposed mitigation measures and to identify constraints associated with the mitigation measures recommended in the EIA study, as well as the provision of any necessary modification; and</p> <p>(xii) to design and specify environmental monitoring and audit requirements to ensure the effective implementation of the recommended environmental protection and pollution control measures.</p> |   |
| 3                                  | DETAILED REQUIREMENTS OF THE EIA STUDY   |   |
| 3.1                                | <p>The Purpose</p> <p>The purpose of this SB is to set out the purposes and objectives of the EIA study, the scope of environmental issues which shall be addressed, the requirements that the EIA study shall need to fulfil, and the necessary procedural and reporting requirements. The Applicant shall demonstrate in the EIA report whether the criteria in the relevant sections of the Technical Memorandum on the Environmental Impact Assessment Process of the Environmental Impact Assessment Ordinance (hereinafter referred to as "the TM"), are fully complied with.</p>  | <p>This EIA Report has covered the items required under Sections 4.1 to 4.3 and Annex 11 of the EIAO-TM. This Appendix 1.1 serves as a compliance check with the EIA Study Brief and EIAO-TM as required in Section 4.4.1 of the EIAO-TM.</p> <p>Annex 3 of EIAO-TM has been followed in considering / identifying adverse environmental impacts. The EIA Report has also been reviewed in accordance with Annex 20 of the EIAO-TM.</p> |

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|                                    |  | <p>For air quality, Section 1 of Annex 4 and Annex 12 of the EIAO-TM have been followed in Section 3.</p> <p>For noise, Annexes 5 and 13 of the EIAO-TM have been followed in Section 4.</p> <p>For water quality, Annex 14 of the EIAO-TM has been followed, and Section 5 describes that with implementation of proposed mitigation measures, criteria described in Annex 6 of the EIAO-TM are expected to be complied with.</p> <p>For waste management implications, Annex 15 of EIAO-TM has been followed, and the criteria described in Annex 7 of the EIAO-TM are complied with in Section 6.</p> <p>For marine ecology, Annex 16 of the EIAO-TM and the criteria described in Annex 9 of the EIAO-TM has been followed in Section 7.</p> <p>For landscape and visual, Annexes 10 and 18 of the EIAO-TM have been followed in Section 8.</p> <p>For cultural heritage, Annexes 10 and 19 of the EIAO-TM have been followed in Section 9.</p> |
| 3.2                                | The Scope  |   |
| 3.2.1                              | <p>The scope of this EIA study shall cover the Project and associated works mentioned in Section 1.2 above. For the purpose of assessing whether the environmental impacts comply with the criteria of the TM, the EIA study shall address the key issues described below, together with any other key issues identified during the course of the EIA study:</p> <p>(i) considerations on alternative design, construction method(s) and sequence(s) so as to avoid and minimise the environmental impacts arising from installing the bridge piles;</p> | <p>All described in Section 1.</p> <p>(i) Alternative design and construction methods and sequences are considered and presented in Section 2. Section 2.6 and 2.7 describe the consideration of alternatives for connect the "airside" of HKIA at ITT and HKBCF Island. Tables 2.1 to 2.3 describe and compare the passenger convenience, engineering and environmental considerations, respectively, of the alternative options. The findings have been addressed in Sections 2.7.3 to 2.7.6. Section 2.9 describes the alternative construction methods for the project and Table 2.9 compares merits and demerits of applying different construction methods. The findings have been addressed in Sections 2.9.3 to 2.9.5.</p>  |

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|                                    | <ul style="list-style-type: none"> <li>(ii) potential air quality impact on the sensitive receivers due to the construction and operation of the Project and the associated works, in particular those arising from the emissions of the vehicles;</li> <li>(iii) potential noise impact on the sensitive receivers due to the construction of the Project and associated works, including impact from construction equipment during construction of the Project;</li> <li>(iv) potential water quality impacts caused by the Project and associated works arising from the construction and operation of the Project;</li> <li>(v) potential waste management issues and impacts arising from the construction and operation of the Project;</li> <li>(vi) potential marine ecological impacts during construction and operation of the Project;</li> <li>(vii) potential landscape and visual impacts on sensitive receivers during the construction and operation of the Project;</li> <li>(viii) the potential impacts on sites of cultural heritage including marine archaeological deposit in the seabed of the Project area likely to be affected during construction of the Project;</li> <li>(ix) potential cumulative environmental impacts of the Project, through interaction or in combination with other existing, committed and planned projects in the vicinity of the Project, and that those impacts may have a bearing on the environmental acceptability of the Project. Consideration shall be given to account for impacts from potential concurrent projects, including but not limited to the planned Tung Chung New Town Extension, Expansion of Hong Kong International Airport into 3-Runways system (3RS), HZMB HKBCF, Hong Kong Link Road (HKLR) and Tuen Mun-Chek Lap Kok Link (TMCKL); and</li> <li>(x) identification of individual project(s) proposed under the Project that fall under Schedule 2 of the EIAO; to ascertain whether the findings of this EIA study have adequately addressed the environmental impacts of those project(s); and where necessary to identify the outstanding issues that need to be addressed in any further detailed EIA studies.</li> </ul> | <ul style="list-style-type: none"> <li>(ii) Air quality impact assessment is presented in Section 3.</li> <li>(iii) Noise impact assessment is presented in Section 4.</li> <li>(iv) Water quality impact assessment is presented in Section 5.</li> <li>(v) Waste management implication is presented in Section 6.</li> <li>(vi) Marine ecological impact assessment is presented in Section 7.</li> <li>(vii) Landscape and visual impact assessment is presented in Section 8.</li> <li>(viii) Cultural heritage impact assessment is presented in Section 9.</li> <li>(ix) Cumulative impact assessment has been conducted where appropriate and presented in Sections 5.8, 7.7 and 8.11.</li> <li>(x) The designated projects under this project are identified and presented in Section 1.2.1. The findings of the EIA study have adequately addressed the environmental impacts of works that fall under Schedule 2 of the EIAO and presented in Section 3 to Section 9.</li> </ul> |
| 3.3                                | Description of the Project  |   |
| 3.3.1                              | <u>Purpose(s) and Objectives of the Project</u><br>The Applicant shall provide information on the purpose(s) and objectives of the Project, and describe the environmental benefit(s) of the Project and scenarios with and without the Project.  | Purposes and objectives of the project are described in Section 2.3.<br>Environmental benefits of the project are described in Table 2.3.<br>Scenarios with and without project are described in Sections 2.5 and 2.6.  |
| 3.3.2                              | <u>Details of the Project</u><br>The Applicant shall indicate the nature and status of Project decision(s) for which the EIA study is undertaken. The Applicant shall describe the proposed design, size, construction methods, and other major activities involved in operation of the Project, using diagrams, plans and/or maps as necessary. The estimated duration of the construction phase and operational phase of the Project together with the programme within these phases shall be provided. The land taken by the Project site, construction site, associated access arrangements, auxiliary facilities and landscaping areas shall be shown on a scaled map.   | The project background is described in Sections 1.1.1 to 1.1.2.<br>The proposed design is described in Sections 1.1.3 and 2.2, while Figure 1.1 illustrates the layout of the project.<br>The construction method for the project is discussed in Section 2.9.<br>The construction duration is presented in Section 2.10.   |

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| 3.3.3                              | <p><u>Background and History of the Project</u></p> <p>The Applicant shall provide information on the site location and site history of the Project. The main environmental impacts of the different practicable design options shall be compared with those of the proposed Project and with the likely future environmental conditions in the absence of the Project.</p>   | <p>The site location of the project is shown in Figure 1.1 and described in Sections 1.1.1 and 2.1.</p> <p>Sections 1.1.1 and 1.1.2 describes the history of the project.</p> <p>Sections 2.6 and 2.7 and Table 2.3 describe and compare alternative options with those of the proposed project and with the likely future environmental constitutions in the absence of the project.</p>  |
| 3.4                                | Technical Requirements  |  |
| 3.4.1                              | <p>The Applicant shall conduct the EIA study to address the environmental aspects of the activities as described in Section 3.2 above. The assessment shall be based on the best and latest information available during the course of the EIA study. The Applicant shall include in the EIA report details of the construction and operational programme and methodologies for assessing environmental impacts of the Project. The Applicant shall clearly state the time frame, staged implementation programme and works programmes of the Project and other concurrent projects, for assessing the cumulative environmental impacts from the Project and interacting projects as identified in the EIA study.</p> | <p>The EIA study was conducted to address all the environmental aspects of the activities as described in Section 3.2 above.</p> <p>The project information is described in Section 2 of the EIA report while technical assessments are presented in Section 3 to Section 9.</p> <p>The assessment was based on the best and the latest information available.</p> <p>Section 2.10 describes the project programme. Sections 2.9.3 and 2.9.4 describes the construction sequence.</p> <p>Approaches and methodologies for assessing environmental impacts of the project have been described in Sections 3.5, 4.5, 5.6, 6.4, 7.3, 8.3, 8.4 and 9.3.</p> <p>For assessing cumulative environmental impacts from the project and interacting projects, the implementation programme and works programmes of the project and other concurrent projects are describes in Sections 2.10 and 2.11 and Table 2.5.</p> |
| 3.4.2                              | The EIA study shall follow the technical requirements specified below and in the Appendices of this EIA SB.   | See compliance check in the checklist.   |
| 3.4.3                              | Air Quality Impact  |  |
| 3.4.3.1                            | The Applicant shall follow the criteria and guidelines for evaluating and assessing air quality impact as stated in Section 1 of Annex 4 and Annex 12 of the TM respectively.   | Air quality impacts have been assessed in accordance with Section 1 of Annex 4 and Annex 12 of the TM as stated in Section 3.1.1.  |
| 3.4.3.2                            | The assessment area for air quality impact assessment shall be defined by a distance of 500 meters from the boundary of the Project site, with consideration to be extended to include major existing, planned and committed air pollutant emission sources identified to have a bearing on the environmental acceptability of the Project. The assessment shall include the existing, committed and planned sensitive receivers within the assessment area. The assessment shall also take into account the impacts of emission sources from nearby concurrent projects, if any. The assessment  | <p>Section 3.4.2 describes 500m assessment area for air quality impact assessment.</p> <p>The assessment area is proposed as 500 m from the boundary of the project site.</p> <p>The representative ASRs (existing / planned) within the 500 m assessment area have been identified based on the</p>   |

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|                                    | shall be based on the best available information at the time of the assessment.   | topographic maps, latest and relevant Outline Zoning Plans (e.g. Chek Lap Kok-OZP No. S/I-CLK/14 and Tung Chung Extension Area OZP No. S/I-TCE/2) and other published plans in the vicinity of the project site.<br><br>Cumulative impact from nearby emission sources have been taken into account.   |
| 3.4.3.3                            | The Applicant shall propose the air sensitive receivers for agreement of the Director. The air quality impact assessment for construction and operation of the Project shall follow the detailed technical requirements given in Appendix B.  | The ASRs (existing/planned) identified and selected for assessment has been agreed by the Director.<br><br>Please refer to compliance check for Appendix B items below.  |
| 3.4.4                              | Noise Impact  |  |
| 3.4.4.1                            | The Applicant shall follow the criteria and guidelines for evaluating and assessing noise impact as stated in Annexes 5 and 13 of the TM respectively.  | Noise impacts have been evaluated and assessed in accordance with Annexes 5 and 13 of the TM as stated in Section 4.1.1.   |
| 3.4.4.2                            | Assessment shall include construction noise and operation noise, impact assessment of the existing, committed and planned noise sensitive receivers earmarked on the relevant Outline Zoning Plans, Development Permission Area Plans, Outline Development Plans, Layout Plans and other relevant published land use plans, including plans and drawings published by the Lands Department and any land use and development applications approved by the Town Planning Board, in the vicinity of the Project.   | The NSRs (existing/ planned) within 300 m assessment area have been identified based on topographic maps, latest and relevant Outline Zoning Plans (e.g. Chek Lap Kok-OZP No. S/I-CLK/14 and Tung Chung Extension Area OZP No. S/I-TCE/2) and other relevant published land use plans in the vicinity of the project site. Noise impact from the Project to these NSRs have been evaluated in Section 4.5.1. |
| 3.4.4.3                            | The Applicant shall propose the assessment area for agreement of the Director before commencing the assessment. The assessment area for the noise impact assessment shall generally include areas within 300 metres from the boundary of the Project and the works of the Project.  | The assessment area has been proposed as 300 m from the boundary of the project site and agreed by the Director, and detailed in Section 4.4.2.  |
| 3.4.4.4                            | If noise sensitive receivers which rely on opened windows for ventilation are identified within the assessment area, quantitative noise impact assessment shall be carried out, otherwise only a qualitative noise impact assessment will be necessary. The Applicant shall propose methodology for agreement of the Director, with reference to Section 4.4.2 of the TM, prior to the commencement of the quantitative assessment.   | Qualitative noise impact assessment is conducted in the EIA report since no NSR which relies on opened windows for ventilation is identified within the assessment area, the assessment is detailed in Section 4.5.1.  |
| 3.4.5                              | Water Quality Impact  |  |
| 3.4.5.1                            | The Applicant shall follow the criteria and guidelines for evaluating and assessing water pollution as stated in Annexes 6 and 14 of the TM respectively.   | The criteria and guidelines for evaluating and assessing water quality impact as stated in Annexes 6 and 14 of the EIAO-TM have been followed and are described in Sections 5.1.1 and 5.2.1.   |
| 3.4.5.2                            | The assessment area for the water quality impact assessment shall include the North Western Water Control Zone as designated under the Water Pollution Control Ordinance (Cap. 358) and the water sensitive receivers in the vicinity of the Project. The assessment area can be extended to include other areas such as existing and new drainage systems and other water system(s) in the vicinity, if they are found also being affected by the Project during the EIA study and have a bearing on the environmental acceptability of the Project. | Section 5.2.2 describes the assessment area for water quality impact assessment which includes North Western Water Control Zone (WCZ).<br>Water sensitive receivers identified within the above WCZ are described in Section 5.3.1 and with their indicative locations shown in Figure 5.1.  |
| 3.4.5.3                            | The water quality impact assessment for the construction and operation of the Project shall follow the detailed technical   | Please refer to compliance check for Appendix C items below.   |

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|                                    | requirements given in <u>Appendix C</u> of this EIA SB.  |   |
| 3.4.6                              | Waste Management Implications  |   |
| 3.4.6.1                            | The Applicant shall follow the criteria and guidelines for evaluating and assessing waste management implications as stated in Annexes 7 and 15 of the TM respectively.  | The criteria and guidelines for evaluating and assessing waste management implications as stated in Annexes 7 and 15 of the EIAO-TM have been followed and are described in Section 6.2.  |
| 3.4.6.2                            | The assessment of the waste management implications arising from the construction and operation of the Project shall follow the detailed technical requirements given in <u>Appendix D</u> of this EIA SB.   | Please refer to compliance check for Appendix D items below.  |
| 3.4.7                              | Marine Ecological Impact   |   |
| 3.4.7.1                            | The Applicant shall follow the criteria and guidelines for evaluating and assessing marine ecological impact as stated in Annexes 8 and 16 of the TM respectively.   | The criteria and guidelines for evaluating and assessing marine ecological impact as stated in Annexes 8 and 16 of the EIAO-TM have been followed and are described in Section 7.1.   |
| 3.4.7.2                            | The assessment area shall be the same as the assessment area for Water Quality Impact Assessment described in Section 3.4.5.2 of this EIA SB or the areas likely to be impacted by the Project.  | The assessment area is defined as within 500 m away from the Project area, details on the selection of assessment area is detailed in Section 7.3.2.  |
| 3.4.7.3                            | The marine ecological impact assessment for the construction and operation of the Project shall follow the detailed technical requirements given in <u>Appendix E</u> of this EIA SB.  | Please refer to compliance check for Appendix E items below.  |
| 3.4.8                              | Landscape and Visual Impacts   |   |
| 3.4.8.1                            | The Applicant shall follow the criteria and guidelines for evaluating and assessing landscape and visual impacts as stated in Annexes 10 and 18 of the TM respectively, and the EIAO Guidance Note No. 8/2010 "Preparation of Landscape and Visual Impact Assessment under the EIAO" and the report of "Landscape Value Mapping in HK".  | The criteria and guidelines for evaluating and assessing landscape and visual impacts as stated in Annexes 10 and 18 of the EIAO-TM, and the EIAO Guidance Note No. 8/2010 "Preparation of Landscape and Visual Impact Assessment under the EIAO" and the report of "Landscape Value Mapping in HK" have been followed and are as described in Section 8.2.1. |
| 3.4.8.2                            | The assessment area for the landscape impact assessment shall include landscape character areas and landscape resources within 500 metres from the boundary of the Project Area and the works of the Project within the Study Area as identified in the EIA, while the assessment area for the visual impact assessment shall be defined by the visual envelope of the Project. The extent of the defined visual envelope shall be shown on a plan and documented in the EIA report. | Figure 8.2 and Figure 8.3 identify the landscape resources and landscape character area within the 500 m boundary offset respectively, as described in Sections 8.6.1 and 8.6.2 respectively.   |
| S3.4.8.3                           | The landscape and visual impact assessments for the construction and operation of the Project shall follow the detailed technical requirements given in <u>Appendix F</u> of this EIA SB.  | Visual envelope is described in Sections 8.6.5 and 8.6.6 and shown in Figure 8.5.<br>Please refer to compliance check for Appendix F items below.   |
| 3.4.9                              | Impact on Cultural Heritage  |   |
| 3.4.9.1                            | The Applicant shall follow the criteria and guideline for evaluating and assessing the cultural heritage impacts as staged in Annexes 10 and 19 of the TM respectively.  | The criteria and guidelines for evaluating and assessing impact on cultural heritage as stated in Annexes 10 and 19 of the EIAO-TM have been followed and are described in Section 9.1.   |
| 3.4.9.2                            | A marine archaeological investigation (MAI) in the area to be affected by the marine works associated with the construction of the proposed infrastructure such as the pedestrian/vehicular connection/link between the HKIA and the HKBCF shall be conducted. In the event that potential adverse impacts on cultural heritage are identified, the Applicant shall approach the Director for additional specific requirements on the assessment of cultural                         | As there is no potential existence of cultural heritage site or object is situated within and in the vicinity of project area (as shown in Figure 9.2) based on the results of three (3) MAIs conducted between 2004 and 2008, the need for further investigation is not required. The impact assessment is   |

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|                                    | heritage impact. The MAI shall follow the detailed technical requirements given in <u>Appendix G</u> .  | detailed in Section 9.7.<br><br>Please refer to compliance check for Appendix G items below.  |
| 3.5                                | <u>Environmental Monitoring and Audit (EM&amp;A) Requirements</u>   |   |
| 3.5.1                              | The Applicant shall identify and justify in the EIA study whether there is any need for EM&A activities during the construction and operation phases of the Project and, if affirmative, to define the scope of the EM&A requirements for the Project in the EIA study.   | EM&A programmes have been set and are presented in Section 10. It has been identified that the following sections and relevant monitoring would be required due to the impacts identified in the EIA:<br>Air – compliance check through site audits<br>Noise – compliance check through site audits<br>Water – Construction phase water quality monitoring<br>Waste management – Construction phase weekly site audit<br>Ecology – Pre-construction coral dive survey and post-translocation coral monitoring surveys<br>Landscape and visual – Compliance check on implementation of mitigation measures   |
| 3.5.2                              | Subject to the confirmation of the EIA study findings, the Applicant shall comply with the requirements as stipulated in Annex 21 of the TM.  | Requirements described in Annex 21 of the EIAO-TM are described in the EM&A Manual.<br>EM&A programmes have been set and are presented in the EM&A Manual. It has been identified that the following sections and relevant monitoring would be required due to the impacts identified in the EIA:<br>Air – compliance check through site audits<br>Noise – compliance check through site audits<br>Water – Construction phase water quality monitoring<br>Waste management – Construction phase weekly site audit<br>Ecology – Pre-construction coral dive survey and post-translocation coral monitoring surveys<br>Landscape and visual – Compliance check on implementation of mitigation measures |
| 3.5.3                              | The Applicant shall prepare a Project Implementation Schedule (in the form of a checklist as shown in <u>Appendix H</u> ) containing all the EIA study recommendations and mitigation measures with reference to the implementation programme.  | Implementation Schedule with the EIA study recommendations and mitigation measures with reference to the implementation programme is provided in Appendix 10.1 of the EIA Report and Appendix B of the EM&A Manual.   |
| S3.6                               | Presentation of Summary Information   |   |
| 3.6.1                              | <u>Summary of Environmental Outcomes</u><br><br>The EIA report shall contain a summary of key environmental outcomes arising from the EIA study, including estimated population protected from various environmental impacts, environmentally sensitive areas protected, environmentally friendly options considered and incorporated in the preferred option, environmental designs recommended, key environmental problems avoided, compensation areas included and the environmental benefits of environmental protection measures | A summary of key environmental outcomes arising from the EIA study, including estimated population protected from various environmental impacts, environmentally friendly options considered and incorporated in the preferred option, environmental designs recommended, key environmental problems avoided, compensation areas included and the environmental benefits of   |



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| 3.6.2                              | <p>recommended.</p> <p><u>Summary of Environmental Impacts</u></p> <p>To facilitate effective retrieval of pertinent key information, the EIA report shall contain a summary table of environmental impacts showing the assessment points, results of impact predictions, relevant standards or criteria, extents of exceedances predicted, impact avoidance measures considered, mitigation measures proposed and residual impacts (after mitigation). This summary shall cover each individual impact and shall also form an essential part of the executive summary of the EIA report.</p>   | <p>environmental protection measures is provided in Section 11.</p> <p>A summary table of environmental impacts showing the assessment points, results of impact predictions, relevant standards or criteria, extents of exceedances predicted, impact avoidance measures considered, mitigation measures proposed and residual impacts (after mitigation) is provided in Appendix 12.2.</p>   |
| 3.6.3                              | <p><u>Documentation of Key Assessment Assumptions, Limitation of Assessment Methodologies and related Prior Agreement(s) with the Director</u></p> <p>The EIA report shall contain a summary including the assessment methodologies and key assessment assumptions adopted in the EIA study, the limitations of these assessment(s) methodologies/assumptions, if any, plus relevant prior agreement(s) with the Director or other Authorities on individual environmental media assessment components. The proposed use of any alternative assessment tool(s) or assumption(s) have to be justified by the Applicant, with supporting documents based on cogent, scientific and objectively derived reason(s) before seeking the Director's agreement. The supporting documents shall be provided in the EIA report.</p> | <p>A summary including the assessment methodologies and key assessment assumptions adopted in the EIA study, the limitations of these assessment(s) methodologies/assumptions, if any, plus relevant prior agreement(s) with the Director or other Authorities on individual environmental media assessment components, is presented in Appendix 12.1.</p> <p>The proposed use of any alternative assessment tool(s) or assumption(s) have to be justified by the Applicant, with supporting documents based on cogent, scientific and objectively derived reason(s) before seeking the Director's agreement is provided in Appendix 12.2.</p> |
| 4                                  | DURATION OF VALIDITY  |  |
| 4.1                                | <p>The Applicant shall notify the Director of the commencement of the EIA study. If the EIA study does not commence within 36 months after the date of issue of this EIA SB, the Applicant shall apply to the Director for a fresh EIA study brief before commencement of the EIA study.</p>  | Noted.   |
| 5                                  | REPORTING REQUIREMENTS  |  |
| 5.1                                | <p>In preparing the EIA report, the Applicant shall refer to Annex 11 of the TM for the contents of an EIA report. The Applicant shall also refer to Annex 20 of the TM, which stipulates the guidelines for the review of an EIA report. When submitting the EIA report to the Director, the Applicant shall provide a summary, pointing out where the EIA report the respective requirements of this EIA SB and TM (in particular Annexes 11 and 20) have been addressed and fulfilled.</p>   | <p>This document (Appendix 1.1) is the summary, pointing out where in the EIA report the respective requirements of this EIA Study Brief have been addressed and fulfilled. Reference to Annexes 11 and 20 of the EIAO-TM are provided in this Appendix 1.1.</p>   |
| 5.2                                | <p>The Applicant shall supply the Director with hard and electronic copies of the EIA report and the executive summary in accordance with the requirements given in Appendix I of this EIA SB. The Applicant shall, upon request, make additional copies of the above documents available to the public, subject to payment by the interested parties of full costs of printing.</p>  | Noted.   |
| 6                                  | OTHER PROCEDURAL REQUIREMENTS   |  |
| 6.1                                | <p>If there is any change in the name of Applicant for this EIA SB during the course of the EIA study, the Applicant must notify the Director immediately.</p>  | Noted.   |
| 6.2                                | <p>If there is any key change in the scope of the Project mentioned in</p>  | Noted.   |

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|                                    | Section 1.2 of this EIA SB and in Project Profile (No. PP-556/2017), the Applicant must seek confirmation from the Director in writing on whether or not the scope of issues covered by this EIA SB can still cover the key changes, and the additional issues, if any, that the EIA study must also address. If the changes to the Project fundamentally alter the key scope of this EIA SB, the Applicant shall apply to the Director for a fresh EIA study brief.   |  |
| 7                                  | LIST OF APPENDICES   |  |
| 7.1                                | <p>This EIA SB includes the following appendices:</p> <p>Appendix A – Location map of Project Area<br/> Appendix B – Requirement for Air Quality Impact Assessment<br/> Appendix C – Requirements for Water Quality Impact Assessment<br/> Appendix D – Requirements for Waste Management<br/> Appendix E – Requirements for Marine Ecological Impact Assessment<br/> Appendix F – Requirements for Landscape and Visual Impact Assessment<br/> Appendix G – Requirements for Cultural Heritage Impact Assessment<br/> Appendix H – Implementation Schedule<br/> Appendix I – Requirements for EIA Report Documents</p>  | Noted.   |
| Appendix B                         | Requirements for Air Quality Impact Assessment   |  |
| 1.                                 | <p>The air quality impact assessment shall include the following:</p> <p><u>Background and Analysis of Activities</u></p> <p>(i) Provision of background information relating to air quality issues relevant to the Project, e.g. description of the types of activities of the Project that may affect air quality during both construction and operational stages.</p> <p>(ii) Provision of an account, where appropriate, of the consideration/measures that have been taken into consideration in the planning of the Project to avoid and minimise the air pollution impact. The Applicant shall consider alternative construction methods, phasing programmes and alternative modes of operation to minimise the air quality impact during construction and operational stages of the Project.</p> <p>(iii) Presentation of background air quality levels in the assessment area for the purpose of evaluating cumulative air quality impacts during construction and operational stages of the Project. If PATH model is used to estimate the background air quality, details for the estimation of the emission sources to be adopted in the model runs should be clearly presented.</p> | <p>Construction phase air quality impact is discussed in Sections 3.5.1 to 3.5.5. Potential dust impact generated from construction activities, such as site clearance, minor excavation with limited backfilling, and wind erosion of exposed area, and emission from Powered Mechanical Equipments (PMEs) would not be significant.</p> <p>Operational phase air quality impact is discussed in Section 3.5.6. As 100% electrical vehicles will be used, there will be no air pollutants emission during the operation of the project. Presented in Section 3.5.1 to 3.5.3 for construction phase impact and Section 3.5.6 for operational impact.</p> <p>Presented in Sections 3.3.1 and 3.3.2 Existing air quality conditions are presented using collected ambient air quality monitoring data.</p> <p>Presented in Section 3.3.4 The future background concentrations are made reference to the EPD's PATH's</p> |

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| 2.                                 | <p><u>Identification of Air Sensitive Receivers (ASRs) and Examination of Emission / Dispersion Characteristics</u></p> <p>(i) Identification and description of the existing, committed and planned ASRs that would likely be affected by the Project, including those earmarked on the relevant Outline Zoning Plans, Development Permission Area Plans, Outline Development Plans, Layout Plans and other relevant published land use plans, including plans and drawings published by the Lands Department and any land use and development applications approved by the Town Planning Board. The Applicant shall select the assessment points of the identified ASRs that represent the worst impact point of these ASRs. A map clearly showing the location and description such as name of the buildings, uses and height of the selected assessment points shall be given. The separation distances of these ASRs from the nearest emission sources during both the construction and operational stages shall also be given. For phased development, the Applicant shall review the development programme and, where appropriate, to include occupiers of earlier phases as ASRs of construction phase impact if they may be affected by works of later phases.</p> <p>(ii) Provision of a list of air pollutant emission sources, including any nearby emission sources which are likely to have impact related to the Project based on the analysis of the construction and operation activities in Section 1 above. Examples of construction stage emission sources include material handling and vehicular movements on site, etc. Examples of operational stage emission sources include exhaust emissions from vehicles, etc. Confirmation regarding the validity of assumptions and the magnitude of activities (e.g. volume of construction materials to be handled) shall be obtained from the relevant government departments/authorities and documented in the EIA report.</p> <p>(iii) Identification of chimneys and obtainment of relevant chimney emission data in the assessment area, where appropriate, by carrying out a survey for assessing the cumulative air quality impact of air pollutants through chimneys. The Applicant shall ensure and confirm the validity of the emission data used in their assessment. Any errors found in their emission data used may render the submission invalid.</p> <p>(iv) The emissions from any concurrent projects identified as relevant during the course of the EIA study shall be taken into account as contributing towards the overall cumulative air quality impact. The impacts at the existing, committed and planned ASRs within the assessment area shall be assessed, based on the best information available at the time of assessment.</p> | <p>modelling results.</p> <p>Section 3.4.2 describes 500 m assessment area for the construction phase assessment. The assessment area is proposed as 500 m from the boundary of the project site. Section 3.4.4 and Figure 3.1 describe ASRs for construction phase assessment.</p> <p>The representative ASRs (existing / planned) that could be affected by the project within the 500 m assessment area have been identified based on the topographic maps, the latest and relevant Outline Zoning Plans (OZPs) (e.g. Chek Lap Kok – OZP (Plan No. S/I-CLK/14) and Tung Chung Extension Area – OZP (Plan No. S/I-TCE/2)).and other published plans in the vicinity of the project site.</p> <p>Section 3.4.5 describes no ASRs is identified to be affected by option of the project as no air pollutants emissions would be generated due to the adoption of 100% electric vehicles for this project.</p> <p>Discussed in Sections 3.5.1 to 3.5.5</p> <p>Potential dust impact generated from construction activities, such as site clearance, minor excavation with limited backfilling, and wind erosion of exposed area, and emission from Powered Mechanical Equipments (PMEs) would not be significant.</p> <p>Not applicable.</p> <p>No significant dust impact is anticipated during construction phase (refer to Section 3.5.4) and there is no air pollutant emission during operation phase (refer to Section 3.5.6). As such, no quantitative assessment is conducted.</p> |
| 3.                                 | <p><u>Construction Phase Air Quality Impact</u></p> <p>(i) The Applicant shall follow the requirements stipulated under the Air Pollution Control (Construction Dust) Regulation to ensure that construction dust impacts are controlled within the relevant standards as stipulated in Section 1 of Annex 4 of the TM.</p>  | <p>Presented in Sections 3.6.1 and 3.6.2, adverse air quality impact is not anticipated.</p> <p>The relevant requirements stipulated in the Air Pollution Control (Construction Dust) Regulation and the good practices for dust</p>  |

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|                                    | <p>(ii) If the Applicant anticipates that the Project will give rise to significant construction dust impacts likely to exceed recommended limits in the TM at the ASRs identified within the assessment area despite the incorporation of the dust control measures proposed, a quantitative assessment shall be carried out to evaluate the construction dust impact at the identified ASRs. The Applicant shall follow the methodology set out in Section 5 below when carrying out the quantitative assessment.</p> <p>(iii) Where necessary, the Applicant shall consider and evaluate direct mitigation measures, including but not limited to water-spraying, re-scheduling construction programme to minimise concurrent dust impact arising from different construction sites, for fugitive dust control. Any mitigation measures recommended for fugitive dust control should be well documented in the EIA report.</p> <p>(iv) A monitoring and audit programme for the construction phase of the Project shall be devised to verify the effectiveness of the proposed control measures so as to ensure proper control of fugitive dust emission.</p> | <p>control were incorporated in the assessment.<br/>Presented in Section 3.5.4, the project would not give rise to significant construction dust impact based on evaluation. Hence, no quantitative assessment is conducted.</p> <p>Presented in Section 3.7.1, recommended dust suppression measures are discussed.</p> <p>Discussed in Section 3.9.1<br/>Regular dust monitoring is considered necessary during the construction phase of the project and regular site audits are also required to ensure the dust control measures are properly implemented effectively.</p> |
| 4.                                 | <u>Operational Phase Air Quality Impact</u>  |   |
|                                    | <p>(i) The Applicant shall assess the expected air quality impact at the identified ASRs within the assessment area as defined in section 3.4.3.2 of this SB based on an assumed reasonably worst-case scenario under normal operating conditions of the Project.</p> <p>(ii) If the assessment indicates likely exceedances of the recommended limits in the TM at the ASRs identified within the assessment area, a quantitative assessment should be carried out to evaluate the operational phase air quality impacts at the identified ASRs. The Applicant shall follow the methodology set out in section 5 below when carrying out the assessment.</p> <p>(iii) A monitoring and audit programme for the operational phase of the Project shall be devised to verify the effectiveness of the proposed control measures so as to ensure proper control of operational air quality impacts.</p>  | <p>The operational air quality impact is discussed in Sections 3.5.6 and 3.6.3. Only electric vehicles will be used under normal operating conditions of the project, there will be no air pollutants emission during the operation of the project. Hence, adverse air quality impact is not anticipated. No quantitative assessment is conducted.</p> <p>As mentioned in Section 3.9.1, no monitoring is required but site audit during construction phase is recommended.</p>   |
| 5.                                 | <u>Quantitative Assessment Methodology</u>   |   |
|                                    | <p>(i) The Applicant shall conduct quantitative assessment by applying the general principles enunciated in the modelling guidelines in <u>Appendix B-1</u> while making allowance for the specific characteristic of the Project. This specific methodology must be documented in such level of details, preferably associated with tables and diagrams, to allow the readers of the EIA report to grasp how the model has been set up to simulate the situation under study without referring to the model input files. In case of doubt, prior agreement between the Applicant and the Director on specific modelling details should be sought.</p> <p>(ii) For the purpose of assessing the compliance with the criteria as stated in Section 1 of Annex 4 of the TM, the Applicant shall identify the key/representative air pollution parameters (types</p>  | <p>No quantitative assessment is conducted.</p> <p>As discussed in Sections 3.5.6 and 3.6.3, only electric vehicles will be used under normal operating conditions of the project, there will be no air pollutants emission during the operation of the project. Hence, adverse air quality impact is not anticipated.</p>  |

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|                                    | <p>of pollutants and the averaging time concentrations) to be evaluated and provide explanation for selecting these parameters for assessing the impact of the Project.</p> <p>(iii) Calculation of the relevant pollutant emission rates for input to the model and a map(s) showing the road links and emission sources shall be presented in the EIA report. A summary table of the emission rates shall be presented in the EIA report. The Applicant shall ensure consistency between the text description and the model files at every stage of submission for review.</p> <p>(iv) The air pollution impacts of future road traffic shall be calculated based on the highest emission strength from the road vehicles in the assessment area within the next 15 years upon commencement of operation of the proposed road. The Applicant shall demonstrate that the selected year of assessment represents the highest emission scenario given the combination of vehicular emission factors and traffic flow for the selected year. The Applicant may use EMFAC-HK. Model released by the Director to determine the Fleet Average Emission Factors, taking into account vehicle fleet mix and other necessary data. Unless otherwise agreed by the Director, the latest version of the EMFAC-HK model shall be used. Use of any alternatives to the EMFAC-HK model shall be agreed with the Director. The traffic flow data and assumptions, such as the exhaust technology fractions, vehicle age/population distribution, traffic forecast and speed fractions, that are used in the assessment shall be presented.</p> <p>(v) For estimating the future background air quality, the Applicant may use the PATH model released by the Director, taking into consideration the major air pollutant emission sources projected for Hong Kong and nearby regions. Unless otherwise agreed by the Director, the latest version of the PATH model shall be used. Use of any alternatives to the PATH model shall be agreed with the Director. Details of the adopted emission sources should be presented.</p> <p>(vi) Ozone Limiting Method (OLM) or Discrete Parcel Method (DPM) or other appropriate method shall be used to estimate the conversion ratio of NO<sub>x</sub> to NO<sub>2</sub> if NO<sub>2</sub> has been identified as a key/representative air pollutant.</p> <p>(vii) The Applicant shall calculate the cumulative air quality impact at the identified ASRs and compare these results against the criteria set out in Section 1 of Annex 4 in the TM. The Applicant shall also calculate the incremental air quality impact at the identified ASRs arising from the Project. The predicted air quality impacts (both unmitigated and mitigated) shall be presented in the form of summary table(s) and pollution contours, to be evaluated against the relevant air quality standards and on any effect they may have on the land use implications. Plans of a suitable scale shall be used to present pollution contents to allow buffer distance requirements to be determined properly.</p> <p>(viii) If vehicle tunnels and/or full enclosures are proposed in the Project, it is the responsibility of the Applicant to ensure that the air quality inside these proposed structures shall comply with EPD's "Practice Note on Control of Air Pollution in Vehicle Tunnels". When assessing air quality impact due to emissions from tunnels/full enclosures, the Applicant shall ensure prior agreement with the relevant ventilation design engineer over the amount and the types/kinds of pollutants</p> |                  |

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|                                    | <p>emitted from these full enclosures; and such assumptions shall be clearly and properly documented in the EIA report.</p> <p>(ix) If there are any direct technical noise remedies recommended in the study, the air quality implication due to these technical remedies shall be assessed. For instance, if barriers that may affect dispersion of air pollutants are proposed, then the implications of such remedies on air quality impact shall be assessed. If noise enclosure is proposed, then portal emissions of the enclosed road section shall also be assessed. The Applicant shall highlight clearly the locations and types of agreed noise mitigating measures (Where applicable), be they noise barriers, road enclosures and their portals, and affected ASRs, on contour maps for reference.</p>   |  |
| 6.                                 | <u>Mitigation Measures for Non-compliance</u>  |  |
|                                    | <p>Consideration for Mitigation Measures</p> <p>(i) When the predicted air quality impact exceeds the criteria set in Section 1 of Annex 4 in the TM, the Applicant shall consider mitigation measures to reduce the air quality impact on the identified ASRs. The feasibility, practicability, programming and effectiveness of the recommended mitigation measures shall be assessed and documented in the EIA report. Specific reasons for not adopting certain workable mitigation measures to reduce the air quality to a level meeting the criteria in the TM or to maximise the protection of the ASRs as far as possible should be clearly substantiated and documented in the EIA report.</p> <p>Evaluation of Residual Air Quality Impact</p> <p>(ii) Upon consideration of mitigation measures, if the mitigated air quality impact still exceeds the relevant criteria in Annex 4 of the TM, the Applicant shall identify, predict, evaluate the residual air quality impact in accordance with Section 4.4.3 and Section 4.5.1(d) of the TM.</p>   | <p>No adverse air quality impact is anticipated, the recommended dust suppression measures are discussed in Section 3.7.1.</p> <p>Presented in Section 3.7.3<br/>As there will be no air pollutants emission during the operation of the project, adverse air quality impact is not anticipated. No mitigation measures is required.</p> <p>As presented in Section 3.8.1<br/>No residual air quality impact is anticipated during construction and operational phases of the project.</p> |
| 7.                                 | <u>Submission of Emission Calculation Details and Models Files</u>   |  |
|                                    | Input and output file(s) of model run(s) including those files for generating the pollution contours and emission calculations work sheets shall be submitted to the Director in electronic format together with the submission of the EIA report.   | No quantitative assessment is conducted.   |
| Appendix B-1                       | <p>Air Quality Modelling Guidelines</p> <p>[The information contained in this Appendix is meant to assist the Applicant in performing the air quality assessment. The Applicant must exercise professional judgement in applying this general information.]</p> <p>The air quality modelling guidelines shall include the following guidelines as published on the website of the Environmental Protection Department (<a href="http://www.epd.gov.hk/epd/english/environmentinhk/air/guide_ref/guide_aqa_model.html">http://www.epd.gov.hk/epd/english/environmentinhk/air/guide_ref/guide_aqa_model.html</a>):</p> <ol style="list-style-type: none"> <li>i) Guidelines on Choice of Models and Model Parameters;</li> <li>ii) Guidelines on Assessing the "Total" Air Quality Impact (Revised);</li> <li>iii) Guidelines on the Use of Alternative Computer Models in Air Quality Assessment (Revised);</li> <li>iv) Guidelines on the Estimation of PM<sub>2.5</sub> for Air Quality Assessment in Hong Kong; and</li> <li>v) Guidelines on the Estimation of 10-minute Average SO<sub>2</sub> Concentration for Air Quality Assessment in Hong Kong.</li> </ol> | No quantitative assessment is conducted.   |

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| Appendix C                         | Requirements for Water Quality Impact Assessment  |  |
| 1.                                 | The Applicant shall identify and analyse physical, chemical and biological disruptions of the water system(s) arising from the construction and operation of the Project.   | Section 5.5 describes the sources of impacts. Section 5.6 describes assessment approach and methodology. Section 5.7 evaluates and assesses the impact from the project.   |
| 2.                                 | The Applicant shall predict, quantify and assess any water quality impacts arising from the construction and operation of the Project by appropriate mathematical modelling and/or other techniques proposed by the Applicant and approved by the Director. The mathematical modelling requirements are set out in <u>Appendix C-1</u> . Possible impacts due to the dredging, other marine works activities, effluent discharge, thermal/cooling water discharges and biocide discharge (if any), discharge including emergency overflow from the sewage pumping stations and sewage treatment works (if any), and site runoff shall include but not limited to changes in hydrology, flow regime, sediment erosion and deposition patterns, morphological change of seabed profile, water and sediment quality, marine and freshwater organisms/community. The prediction shall include possible different construction and operational stages or sequences of the Project. Affected sensitive receivers shall be identified by the assessment tool with indications of degree of severity. | Methodology Paper on Water Quality Impact Assessment detailing the field data set for calibration and validation, the modelling parameters, model coverage area and grid schematization for water quality model simulation, and cumulative impacts due to other projects, activities or pollution sources within a boundary was approved by EPD on 22 Dec 2017.<br>Section 5.5 describes sources of impacts<br>Section 5.6 describes assessment approach and methodology<br>Hydrodynamic modelling was used to evaluate the change in the hydrodynamic regime due to the project.<br>Model results for flow velocity vectors and current velocities were extracted from the assessment points in Table 5.4 for assessment by comparison of the two modelling scenarios (as discussed in Section 5.6.2)<br>Model results for momentary flow and accumulated flow were extracted from the cross section in Table 5.5 for assessment by comparison of the two modelling scenarios (as discussed in Section 5.6.2) |
| 3.                                 | The assessment shall include, but not be limited to the following:<br>(i) the water quality impacts of the site run-off and marine works including but not limited to impacts on suspended solid level, dissolved oxygen and contaminant release, during the construction stage;<br><br>(ii) the water quality impacts of road runoff containing oil/grease and suspended solids during the operational stage;<br><br>(iii) the water quality impacts on sea channel between the HKIA and HKBCF island due to the formation of bridge structure during the operational stage; and<br><br>(iv) the water quality impacts on water sensitive receivers around the Project sites.  | Section 5.5.1 identifies pollution sources from construction site runoff and marine works<br>Section 5.7.1 assess and evaluates potential water quality impact arise from marine works<br>Sections 5.7.6 to 5.7.9 assess and evaluate potential water quality impact arise from site run-off.<br>Section 5.7.10 describes ProPECC Note PN 1/94.<br>Sections 5.7.18 to 5.7.21 assess and evaluates potential water quality impact of road runoff containing suspended solids during the operational stage.<br>Section 5.5.2 describes the changes in hydraulic friction due to the formation of bridge structure during the operational stage.<br>Sections 5.7.14 to 5.7.17 assess and evaluate the change of hydrodynamic regime.<br>Section 5.3.1 describes WSRs identified within the study area for assessment, the indicative locations are shown in Figure 5.1.   |
| 4.                                 | The Applicant shall address water quality impacts due to the construction phase and operational phase of the Project.   |  |

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|                                    | <p>Essentially, the assessment shall address the following :</p> <ul style="list-style-type: none"> <li>(i) collect and review background information on affected existing and planned water system(s), their respective catchments and sensitive receivers which might be affected by the Project;</li> <li>(ii) characterise water and sediment quality of the water system(s) and sensitive receivers, which might be affected by the Project based on existing best available information or through appropriate site survey and tests;</li> <li>(iii) identify and analyse relevant existing and planned future activities, beneficial uses and water sensitive receivers related to the affected water system(s). The Applicant should refer to, inter alia, those developments and uses earmarked on the relevant Outline Zoning Plans, Development Permission Area Plans, Outline Development Plans and Layout Plans, and any other relevant published landuse plans;</li> <li>(iv) identify pertinent water and sediment quality objectives and establish other appropriate water quality criteria or standards for the water system(s) and the sensitive receivers identified in (i), (ii) &amp; (iii) above;</li> <li>(v) review the specific construction methods and configurations, and operation of the Project to identify and predict the likely water quality impacts arising from the Project;</li> <li>(vi) identify any alteration of any drainage system(s), change of water holding/flow regimes, change of catchment types or areas and any other hydrological changes in the study area;</li> <li>(vii) identify and quantify existing and likely future water and sediment pollution sources, including point discharges and non-point sources to surface water runoff, sewage from workforce, and future occupants/users, possible maintenance dredging (if any), based on future land use and other polluted discharge generated from the Project;</li> <li>(viii) provide an emission inventory on the quantities and characteristics of those existing and future pollution sources in the study area. Field investigation and laboratory test, shall be conducted as appropriate to fill relevant information gaps;</li> <li>(ix) predict and quantify the impacts on the water system(s) and their sensitive receivers due to the alterations, changes and the pollution sources identified above. Possible impacts include change in hydrology, flow regime, water quality and release of contaminants, etc. The prediction shall take into account and include possible different construction and operation stages of the Project;</li> <li>(x) assess the cumulative impacts due to other related concurrent and planned projects, activities or pollution sources within the study area that may have a bearing on the environmental acceptability of the Project;</li> </ul> | <p>Section 5.4 collects and reviews background information on affected existing and planned water systems, their respective catchments and sensitive receivers which might be affected by the project.</p> <p>Section 5.4 describes the existing baseline conditions within the study area, which was based on the latest water quality and sediment monitoring data from EPD website (as tabulated in Table 5.2).</p> <p>Section 5.3 describes WSR within the study area and the indicative locations are shown in Figure 5.1.</p> <p>Section 5.6.14 and Table 5.3 describe the committed / on-going / planned coastal developments and the layouts for specific projects are shown in Figure 5.2.</p> <p>Section 5.2.2 and Table 5.1 present relevant local WQOs.</p> <p>Section 5.7.1 and 5.7.2 review the specific construction methods and configurations to identify likely water quality impacts during construction phase, while Section 5.7.18 identifies the sources and likely water quality impacts during operation phase.</p> <p>Section 5.7.14 to 5.7.17 and Appendix 5.4 describe the changes of hydrodynamic regime that may arise due to the project. Committed / on-going / planned coastal developments were included in the assessment.</p> <p>Sections 5.5 and 5.6.1 identify water pollution sources. Section 5.7 and Appendix 5.4 quantify the water pollution sources.</p> <p>The estimated quantities of sewage effluent and surface water runoff are described in Sections 5.7.12, 5.7.18 to 5.7.22.</p> <p>Section 5.7 and Appendix 5.4 predict and quantify the water quality impacts.</p> <p>Section 5.6.14 and Table 5.3 describe the potential concurrent projects. Sections 5.7.14 to 5.7.17, 5.8 and Appendix 5.4 assess the cumulative hydrodynamic impacts due to other related concurrent and planned projects.</p> |



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|                                    | <p>(xi) analyse the provision and adequacy of existing and planned future facilities to reduce pollution arising from the point and non-point sources identified in (vii) above;</p> <p>(xii) develop effective infrastructure upgrading or provision, contingency plan, water pollution prevention and mitigation measures to be implemented during construction and operation stages so as to reduce the water quality impacts to within standards. Measures to prevent and reduce water quality impact of bridge piles during construction and operation of the Project. Requirements to be incorporated in the Project contract document shall also be proposed;</p> <p>(xiii) investigate and develop best management practices to reduce storm water and non-point source pollution as appropriate;</p> <p>(xiv) recommend appropriate mitigation measures to avoid or minimise the impact identified above; and</p> <p>(xv) evaluate and quantify residual impacts on water system(s) and the sensitive receivers with regard to the appropriate water quality objectives, criteria, standards or guidelines. If the mitigated water quality impact still exceeds the relevant criteria in Annex 6 of TM, the Applicant shall identify, predict and evaluate the residual water quality impact and estimate the significance of the residual impact to the water system(s) and the water sensitive receivers.</p> | <p>Addressed in Section 5.9.</p> <p>Section 5.9 describes the recommended mitigation measures to be implemented, including best management practices. The mitigation measures are considered appropriate as no significant adverse residual impact was anticipated for the construction and operation phases. Section 5.11.1 describes environmental monitoring and audit (EM&amp;A) to verify the mitigation measures during construction. Section 5.11.2 describes that no EM&amp;A is required during operation phase.</p> <p>Section 5.9.23 to 5.9.29 describe the best management practices to reduce storm water and non-point source pollution as appropriate.</p> <p>Section 5.9 describes the recommended mitigation measures to be implemented, including best management practices. The mitigation measures are considered appropriate as no significant adverse residual impact was anticipated for the construction and operation phases. Section 5.11.1 describes environmental monitoring and audit (EM&amp;A) to verify the mitigation measures during construction. Section 5.11.2 describes that no EM&amp;A is required during operation phase.</p> <p>Section 5.7 quantifies the water quality impacts, while Section 5.10 describes residual impacts. The mitigation measures are considered appropriate as no significant adverse residual impact was predicted for the construction and operation phases.</p> |
| <u>Appendix C-1</u>                | <u>Hydrodynamic and Water Quality Modelling Requirements</u>   |  |
|                                    | <u>Modelling Software General</u>  |  |
| 1.                                 | The modelling software shall be fully 3-dimensional capable of accurately simulating the stratified condition, salinity transport, and effects of wind and tide on the water body within the model area.   | Sections 5.6.3 and 5.6.4 describes the modelling software, Delft-3D used to simulate the "with Project" and "without Project" scenarios in operational phase.  |
| 2.                                 | The modelling software shall consist of hydrodynamic, water quality, sediment transport, thermal and particle dispersion modules. All modules shall have been proven with successful applications locally and overseas.  | Only hydrodynamic modelling have been conducted under this study. Delft-3D modelling software has been used locally and internationally for hydrodynamic and water quality simulations. Some local examples include the EIA of HKBCF, TM-CLKL, HATS 2A, Kai Tak Development, SCL Protection works at CBTS, WDII and CWB etc.   |
| 3.                                 | The hydrodynamic, water quality, sediment transport and thermal modules shall be strictly mass conserved at all levels.  | The hydrodynamic module are mass conserved at all levels.  |
| 4.                                 | An initial dilution model shall be used to characterize the initial mixing of the effluent discharge, and to feed the terminal level and   | Not applicable.  |

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|   | size of the plume into the far field water quality modules where necessary. The initial dilution model shall have been proven with successful applications locally and overseas.  |  |   |                       |       |   |              |                                   |        |                                     |              |   |              |                              |           |  |
|   | <u>Model Details – Calibration and Validation</u>   |  |   |                       |       |   |              |                                   |        |                                     |              |   |              |                              |           |  |
| 1.  | The models shall be properly calibrated and validated against applicable existing and/or newly collected field data before their use in this study in the Hong Kong waters, the Pearl Estuary and the Dangan (Lema) Channel. The field data set for calibration and validation shall be agreed with the Director.   | The detailed model adopted under this Study is based on the model setup of the regional Update model. This model has been set up, calibrated and validated under previous agreements with the Government of Hong Kong.   |   |                       |       |   |              |                                   |        |                                     |              |   |              |                              |           |  |
| 2.  | Tidal data shall be calibrated and validated in both frequency and time domain manner.  | Section 5.6.17 and Appendix 5.3 describe the model validation in both frequency and time domain manner.  |   |                       |       |   |              |                                   |        |                                     |              |   |              |                              |           |  |
| 3.  | For the purpose of calibration and validation, the model shall run for not less than 15 days of real sequence of tide (excluding model spin up) in both dry and wet seasons with due consideration of the time required to establish initial conditions.  | Section 5.6.10 describes the model run covered a 15-day full spring-neap cycle (excluding model spin up) in both dry and wet seasons with sufficient spin-up time.   |   |                       |       |   |              |                                   |        |                                     |              |   |              |                              |           |  |
| 4.  | <p>In general the hydrodynamic models shall be calibrated to the following criteria:</p> <table border="0" data-bbox="347 864 986 1240"> <thead> <tr> <th style="text-align: left;"><u>Criteria</u></th> <th style="text-align: left;"><u>Level of fitness with field data</u></th> </tr> </thead> <tbody> <tr> <td>• tidal elevation (@)</td> <td>&lt; 8 %</td> </tr> <tr> <td>• maximum phase error at high water and low water</td> <td>&lt; 20 minutes</td> </tr> <tr> <td>• maximum current speed deviation</td> <td>&lt; 30 %</td> </tr> <tr> <td>• maximum phase error at peak speed</td> <td>&lt; 20 minutes</td> </tr> <tr> <td>• maximum direction error at peak speed</td> <td>&lt; 15 degrees</td> </tr> <tr> <td>• maximum salinity deviation</td> <td>&lt; 2.5 ppt</td> </tr> </tbody> </table> <p>@ Root mean square of the error including the mean and fluctuating components shall meet the criteria at no less than 80% of the monitoring stations in the model domain</p> | <u>Criteria</u>  | <u>Level of fitness with field data</u> | • tidal elevation (@) | < 8 % | • maximum phase error at high water and low water | < 20 minutes | • maximum current speed deviation | < 30 % | • maximum phase error at peak speed | < 20 minutes | • maximum direction error at peak speed | < 15 degrees | • maximum salinity deviation | < 2.5 ppt | Section 5.6.17 and Appendix 5.3 describe the model validation. |
| <u>Criteria</u>                                   | <u>Level of fitness with field data</u>   |  |   |                       |       |   |              |                                   |        |                                     |              |   |              |                              |           |  |
| • tidal elevation (@)                             | < 8 %   |  |   |                       |       |   |              |                                   |        |                                     |              |   |              |                              |           |  |
| • maximum phase error at high water and low water | < 20 minutes  |  |   |                       |       |   |              |                                   |        |                                     |              |   |              |                              |           |  |
| • maximum current speed deviation                 | < 30 %  |  |   |                       |       |   |              |                                   |        |                                     |              |   |              |                              |           |  |
| • maximum phase error at peak speed               | < 20 minutes  |  |   |                       |       |   |              |                                   |        |                                     |              |   |              |                              |           |  |
| • maximum direction error at peak speed           | < 15 degrees  |  |   |                       |       |   |              |                                   |        |                                     |              |   |              |                              |           |  |
| • maximum salinity deviation                      | < 2.5 ppt   |  |   |                       |       |   |              |                                   |        |                                     |              |   |              |                              |           |  |
| 5.  | The consultants shall be responsible for acquiring/developing and calibration of the models for use in this study. They may make reference to the models developed under the Update on Cumulative Water Quality and Hydrological Effect of Coastal Developments and Upgrading of Assessment Tool (Agreement No. CE 42/97). They may also propose to use other models subject to agreement with the Director.  | Section 5.6.5 describes the development and calibration of the model adopted under this Study which make reference to the models developed under the Update on Cumulative Water Quality and Hydrological Effect of Coastal Developments and Upgrading of Assessment Tool (Agreement No. CE 42/97). |   |                       |       |   |              |                                   |        |                                     |              |   |              |                              |           |  |
|   | <u>Model Details – Simulation</u>   |  |   |                       |       |   |              |                                   |        |                                     |              |   |              |                              |           |  |
| 1.  | The water quality modelling results shall be qualitatively explainable and any identifiable trend and variations in water quality shall be reproduced by the model. The water quality model shall be able to simulate and take account of the interaction of dissolved oxygen, phytoplankton, organic and inorganic nitrogen, phosphorus, silicate, BOD, temperature, suspended solids, contaminants release of dredged and disposed material, air-water exchange, E. coli and benthic processes. It shall also simulate salinity. Salinity results simulated by hydrodynamic models and water quality models shall be demonstrated to be consistent.   | Section 5.6.17 and Appendix 5.3 qualitatively assess and evaluate the hydrodynamic behaviors reproduced by the model.  |   |                       |       |   |              |                                   |        |                                     |              |   |              |                              |           |  |
| 2.  | The sediment transport module for assessing impacts of sediment loss due to marine works shall include the processes of settling, deposition and re-erosion. The values of the modelling parameters shall be agreed with the Director. Contaminants   | Not applicable.  |   |                       |       |   |              |                                   |        |                                     |              |   |              |                              |           |  |

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|                                    | release and DO depletion during bridge piles installation shall be simulated by the model.  |   |
| 3.                                 | The thermal model shall be based on the flow field produced by the hydrodynamic model. It shall incorporate the physical processes of thermal / cooled water discharge and abstraction flow, buoyancy effect of the thermal plume, and surface heat exchange. Dispersion of biocides in the discharge shall also be simulated with appropriate decay rates.   | Not applicable.   |
| 4.                                 | The models shall at least cover the Hong Kong waters, the Pearl Estuary and the Dangan Channel to incorporate all major influences on hydrodynamic and water quality. A fine grid model may be used for detailed assessment of this study. It shall either be linked to a far field model or form part of a larger model by gradual grid refinement. The coverage of the fine grid model shall be properly designed such that it is remote enough so that the boundary conditions will not be affected by the Project. The model coverage area shall be agreed with the Director. | Section 5.6.5 describes that the model covers the Hong Kong waters, the Pearl Estuary and the Dangan Channel to incorporate all major influences on hydrodynamic and water quality. A fine grid model is used for detailed assessment of this study. Methodology Paper on Water Quality Impact Assessment which detailing the fine grid model settings includes the model coverage area was submitted and approved by EPD on 22 Dec 2017. |
| 5.                                 | In general, grid size at the area affected by the Project shall be less than 400 m in open waters and less than 75 m around sensitive receivers. The grid shall also be able to reasonably represent coastal features existing and proposed in the Project. The grid schematization shall be agreed with the Director.  | Section 5.6.6 and Appendix 5.1 describe the grid properties. Methodology Paper on Water Quality Impact Assessment which detailing model settings includes the grid schematization was submitted and approved by EPD on 22 Dec 2017.   |
|                                    | <u>Modelling Assessment</u>   |   |
| 1.                                 | The assessment shall include the construction and operational phase of the Project. Where appropriate, the assessment shall also include maintenance dredging. Scenarios to be assessed shall cover the baseline condition and scenarios with various different options proposed by the Applicant in order to quantify the environmental impacts and improvements that will be brought about by these options. Corresponding pollution load, bathymetry and coastline shall be adopted in the model set up.   | Only hydrodynamic modelling have been conducted under this study. Methodology Paper on Water Quality Impact Assessment detailing the modelling tools and modelling methodology to be used for hydrodynamic modelling during the operational phase was submitted and approved by EPD on 22 Dec 2017.   |
| 2.                                 | Hydrodynamic, sediment transport and thermal modules, where appropriate, shall be run for (with proper model spin up) at least a real sequence of 15 days spring-neap tidal cycle in both the dry season and the wet season.  | Section 5.6.10 describes the model run for hydrodynamic modelling covered a real sequence of 15 days spring-neap tidal cycle in both the dry season and the wet season (with proper model spin up).   |
| 3.                                 | Water quality module shall run for (with proper model spin up) a complete year incorporating monthly variations in Pearl River discharges, solar radiation, water temperature and wind velocity in the operational stage. Construction stage impacts, cooling water discharge and floating refuse and debris entrapment may be assessed by simulating typical spring-heap cycles in the dry and wet seasons.  | Not applicable.   |
| 4.                                 | The results shall be assessed for compliance of Water Quality Objectives. Any changes in hydrodynamic regime shall be assessed. Daily erosion / sedimentation rate shall be computed and its ecological impact shall be assessed.   | Sections 5.7.14 to 5.7.17 assess and evaluate the changes in hydrodynamic regime at the representative points.  |
| 5.                                 | The impact on all sensitive receivers shall be assessed.  | Section 5.7.14 to 5.7.17 assess and evaluate the changes in hydrodynamic regime at the representative points.   |
| 6.                                 | Cumulative impacts due to other projects, activities or pollution sources within a boundary to the agreement of the Director shall also be predicted and quantified.  | Section 5.6.14 and Table 5.3 describe the potential concurrent projects. Sections 5.7.14 to 5.7.17, 5.8 and Appendix 5.4 assess and evaluate the associated cumulative impacts from the potential   |

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|                                    |   | concurrent projects.  |
| Appendix D                         | Requirements for Assessment of Waste Management Implications  |   |
|                                    | The assessment of waste management implications shall cover the following:  |   |
| 1.                                 | <p><u>Analysis of Activities and Waste Generation</u></p> <p>(i) The Applicant shall identify the quantity, quality and timing of the wastes arising as a result of the construction and operation activities of the Project, based on the sequence and duration of these activities, e.g. any dredged/excavated sediment/mud, construction and demolition (C&amp;D) materials, floating refuse and other wastes which would be generated during construction and/or operation stage.</p> <p>(ii) The Applicant shall adept appropriate design, general layout, construction methods and programme to minimise the generation of public fill/inert C&amp;D materials and maximise the use of public fill/inert C&amp;D materials for other construction works.</p>  | <p>Quantity, quality and timing of waste generation from construction phase (inert C&amp;D, non-inert C&amp;D, excavated sediment, chemical waste, general refuse and potential floating refuse) are included in Sections 6.4.2 to 6.4.30. Sections 6.4.33 to 6.4.38 covers the quantity, quality and timing of waste generation from operational phases (chemical waste and municipal solid waste (MSW)).</p> <p>Efforts to be made in minimising generation and off-site disposal of C&amp;D materials are described in Sections 6.4.3 to 6.4.5.</p>  |
| 2.                                 | <p><u>Proposal for Waste Management</u></p> <p>(i) Prior to considering the disposal options for various types of wastes, opportunities for reducing waste generation, on-site or off-site re-use and recycling shall be fully evaluated. Measures that can be taken in the planning and design stages e.g. by modifying the design approach and in the construction stage for maximising waste reduction shall be separately considered.</p> <p>(ii) The Applicant shall consider alternative project designs/measures to avoid/minimise floating refuse accumulation/entrapment and measures/proposals for the potential floating refuse problem, e.g. streamlining the shoreline design; measures to improve the tidal flushing capacity; alternative seawall design to facilitate floating refuse collection; and regular collection of the floating refuse along the shoreline. Regarding the potential trapping of floating refuse along the shoreline of the Project, the Applicant shall estimate as far as practicable the amount of floating refuse to be found/trapped along the shoreline of the Project in construction stage and after the completion of the Project. The Applicant shall develop an effective plan/design to avoid/minimise the trapping of floating refuse. If floating refuse is identified and needs to be dealt with, the Applicant shall propose appropriate measures to deal with this floating refuse in a proper and acceptable manner e.g. to collect, recycle, reuse, store, transport and dispose of.</p> <p>(iii) After considering the opportunities for reducing waste generation and maximizing re-use, the types and quantities of the wastes required to be disposed of as a consequence shall be estimated and the disposal methods/options for each type of wastes shall be described in detail. The disposal methods/options recommended for each type of wastes shall take into account the result of the assessment in (v) below.</p> <p>(iv) The EIA report shall also state clearly the transportation routings and the frequency of the trucks/vessels involved, any barging point or conveyor system to be used, the stockpiling</p> | <p>The opportunities for reducing waste generation, on-site or off-site re-use and recycling are fully evaluated discussed in Sections 6.4.5, 6.4.8, 6.4.12, 6.4.21, 6.4.22, 6.4.23 and 6.4.30.</p> <p>Proper management and education would be given to construction site workers. The refuse should be stored in enclosed bin to avoid adverse impacts to the surroundings, including marine environment. Regular checking should also be carried out to ensure that the refuse is stored properly. Details are discussed in Sections 6.4.30 and 6.5.24.</p> <p>The estimated quantities of C&amp;D materials and excavated sediment required to be disposed of and the disposal methods are summarised in Table 6.1 and Table 6.5. Detailed disposal methods/options are discussed in Sections 6.4.5, 6.4.8, 6.4.12, 6.4.21, 6.4.22, 6.4.23, 6.4.28, 6.4.29 and 6.4.30.</p> <p>As presented in Section 6.4.31, it is expected that there will be a maximum of 10 vehicles per day for transporting waste</p> |

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|                                    | <p>areas and the disposal outlets for the wastes identified.</p> <p>(v) The impact caused by handling (including stockpiling, labelling, packaging and storage), collection, transportation and re-use/disposal of wastes shall be addressed in detail and appropriate mitigation measures shall be proposed. This assessment shall cover the following areas :</p> <ul style="list-style-type: none"> <li>- air and odour emissions;</li> <li>- noise; and</li> <li>- wastewater discharge.</li> </ul> | <p>during the construction phase.</p> <p>The transportation routings are included in Table 6.6.</p> <p>Details are discussed in Sections 6.4.31 and 6.4.32.</p> <p>The impact caused by handling (including stockpiling, labelling, packaging and storage), collection, and reuse/disposal of wastes during the construction phase of the Project are included in Sections 6.4.3 to 6.4.32, whereas the impact caused by handling (including stockpiling, labelling, packaging and storage), collection, and reuse/disposal of wastes during the operation phase of the Project are included in Sections 6.4.33 to 6.4.38.</p> <p>Construction Phase:</p> <p>Sections 6.4.3 to 6.4.5 – assess the impact caused by storage, handling and disposal of C&amp;D materials.</p> <p>Sections 6.4.6 to 6.4.9 – assess the impact caused by storage, handling and disposal of general refuse.</p> <p>Sections 6.4.10 to 6.4.12 – assess the impact caused by storage, handling and disposal of chemical waste.</p> <p>Sections 6.4.13 to 6.4.29 – assess the impact caused by storage, handling and disposal of excavated sediment.</p> <p>Section 6.4.30 – assess the impact caused by handling and disposal of floating refuse.</p> <p>Section 6.4.31 to 6.4.32 – assess the impact caused by transport of C&amp;D materials, general refuse and chemical waste.</p> <p>Operation Phase:</p> <p>Sections 6.3.34 to 6.4.35 – assess the impact caused by storage, handling and disposal of chemical waste.</p> <p>Sections 6.4.36 to 6.4.38 – assess the impact caused by storage, handling and disposal of MSW.</p> <p>Section 6.5 described mitigation measures against impacts associated with waste management including:</p> <ul style="list-style-type: none"> <li>• Good site practice</li> <li>• Implement Waste Management Plan</li> <li>• Employment of licensed collector to transport and disposal of wastes</li> <li>• Carefully handle/store waste in enclosed bins</li> <li>• Education programme for workers</li> </ul> |
| 3.                                 | <p><u>Excavation/Dredging and Dumping</u></p> <p>(i) The Applicant shall identify and estimate dredging/excavation, dredged/excavated sediment/mud transportation and disposal activities and requirements. Potential dumping ground to be involved shall also be identified. Appropriate field investigation, sampling and chemical and biological laboratory tests to characterize the sediment/mud concerned shall be</p>  | <p>The identification, estimated quantity, level of contamination, as well as disposal options of excavated sediments are presented in Sections 6.4.13 to 6.4.29. The ranges of parameters to be analysed, the number, type and methods of sampling, sample</p>   |

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|                                    | <p>conducted. The ranges of parameters to be analysed; the number, type and methods of sampling; sample preservation; chemical and biological laboratory test methods to be used shall be agreed with the Director (with reference to Section 4.4.2(c) of the TM) prior to the commencement of the tests and documented in the EIA report for consideration. The categories of sediment/mud which are to be disposed of in accordance with a permit granted under the Dumping at Sea Ordinance (DASO) shall be identified by both chemical and biological tests and their quantities shall be estimated. If the presence of contamination of sediment/mud which requires special treatment/disposal is confirmed, the Applicant shall identify the appropriate treatment and/or disposal arrangement and demonstrate its viability in consultation with relevant authorities.</p> <p>(ii) The Applicant shall identify and evaluate the best practical dredging/excavation methods to minimise dredging/excavation and dumping requirements based on the criterion that existing sediment/mud shall be left in place and not to be disturbed as far as possible.</p> | <p>preservation, chemical and biological laboratory test methods to be used were presented in Appendix 6.3 Sediment Sampling and Testing Plan (SSTP), which was agreed with the Director of Environmental Protection (DEP) prior to the commencement of the tests. Table 6.5 estimated sediment quantities for each sediment category.</p> <p>The practicable excavation methods are described in Section 6.4.13, while the handling method is described in Table 6.5. The recommended mitigation measures for excavated sediments are detailed in Sections 6.5.13 to 6.5.23.</p>   |
| Appendix E                         | Requirements for Marine Ecological Impact Assessment   |   |
| 1.                                 | <p>The Applicant shall examine the flora, fauna and other components of the ecological habitats within the assessment area. The aim shall be to protect, maintain or rehabilitate the natural environment. In particular, the Project shall avoid or minimise impacts on recognised sites of conservation importance and other ecologically sensitive areas. The assessment shall identify and quantify as far as possible the potential ecological impacts associated with the Project, both directly by physical disturbance and indirectly by change of water quality and hydrodynamic regime to important habitats and the associated wildlife groups/species.</p>   | <p>Ecological impact assessment is presented in Section 7. Potential ecological impacts on marine wildlife and habitats, particularly recognised sites and species of conservation importance are identified and quantified in Sections 7.6.1 to 7.6.20 and Table 7.16.</p>   |
| 2.                                 | <p>The assessment shall include the following major tasks:</p> <p>(i) review the findings of relevant studies/surveys, including but not limited to the 3RS, HZMB HKBCF and HKLR EIA/EM&amp;A, and the Tung Chung New Town Extension (TCNTE) EIA, and collate the available information regarding the ecological characters of the assessment area;</p> <p>(ii) evaluate the information collected, identify any information gap relating to the assessment of potential ecological impact, and determine the ecological field surveys and investigations that are needed for an impact assessment as required in the following sub-sections;</p> <p>(iii) carry out necessary ecological field surveys with a duration of at least four months, and investigation to verify the information collected, fill the information gaps as identified in sub-section (ii) above, and to fulfil the objectives of the EIA study. The field surveys shall cover but not be limited to flora, fauna and any other habitats/species of conservation importance, and shall include benthic community survey, and underwater dive</p>  | <p>Studies/surveys of 3RS, HZMB HKBCF and HKLR EIA/EM&amp;A, TCNTE EIA and other relevant available information listed in Table 7.1 regarding the ecological characters of the assessment area are reviewed and evaluated in Sections 7.4.1 to 7.4.11.</p> <p>Collected information is evaluated in Sections 7.5.1 to 7.5.5, as well as from Tables 7.11 to 7.15. Information gap relating to the assessment of potential ecological impact is identified in Sections 7.3.4 to 7.4.5. Methodologies of ecological field surveys and investigations that are needed for an impact assessment are described in Sections 7.3.1 to 7.3.2, and from Sections 7.3.6 to 7.3.13.</p> <p>Coral, benthic community and intertidal surveys were conducted to verify the information collected, fill the information gaps as identified, and to fulfil the objectives of the EIA study. Survey schedule/methods findings are detailed in Sections 7.3.6 to 7.3.13, and 7.4.12 to 7.4.34 respectively.</p> |

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|                                    | <p>survey for coral communities;</p> <p>(iv) establish the ecological profile of the assessment area based on information collected in the tasks mentioned in sub-section (i) to (iii) above, and describe the characteristics of each habitat found, the data set should be comprehensive and representative, and is up to date and valid for the purpose of this assessment. Major information to be provided shall include:</p> <p>(a) description of the physical environment, including all recognized sites of conservation importance and ecologically sensitive areas;</p> <p>(b) habitat maps of suitable scale (1:1000 to 1:5000) showing the types and locations of habitats and species of conservation interest in the assessment area;</p> <p>(c) ecological characteristics of each habitat type such as size, vegetation and/or substrate type, species present, dominant species found, species richness and abundance of major taxa groups, community structure, seasonal patterns, ecological value, inter-dependence of the habitats and species, and presence of any features of ecological importance;</p> <p>(d) representative colour photographs of each habitat type and any important ecological features identified;</p> <p>(e) species found that are rare, endangered and/or listed under local legislation, international conventions for conservation of wildlife / habitats or Red Data Books.</p> <p>(v) investigate and describe the existing wildlife uses of various habitats with special attention to those wildlife groups and habitats with conservation interest, including but not limited to the following :</p> <p>(a) corals;</p> <p>(b) benthic communities;</p> <p>(c) Chinese White Dolphin (CWDs); and</p> | <p>The physical environment including all recognised sites of conservation importance and ecologically sensitive areas is described in Sections 7.4.1 to 7.4.4.</p> <p>Habitat map of suitable scale (1:1000 to 1:5000) showing the types and locations of habitats and species of conservation interest in the assessment area is indicated in Figure 7.2.</p> <p>Ecological characteristics of each habitat type such as size, vegetation and/or substrate type, species present, dominant species found, species richness and abundance of major taxa groups, community structure, seasonal patterns, ecological value, inter-dependence of the habitats and species, and presence of any features of ecological importance are presented in Sections 7.5.2 to 7.5.5, and Tables 7.11 to 7.15.</p> <p>Representative colour photographs of each habitat type and important ecological features identified are illustrated in Appendices 7.2 and 7.4.</p> <p>Information about identified species that are rare, endangered and/or listed under local legislation, international conventions for conservation of wildlife / habitats or Red Data Books is detailed in Sections 7.4.14, 7.4.1 to 7.4.20, 7.5.2, Tables 7.11 and 7.15.</p> <p>Information on existing coral species within assessment area, including findings of coral surveys, is described in Sections 7.4.5, 7.4.12 to 7.4.20.</p> <p>Information on existing benthic species within assessment area, including findings of benthos surveys, is described in Sections 7.4.6 to 7.4.7, and 7.4.22 to 7.4.30.</p> <p>Information on CWDs within assessment area is described in Sections 7.4.9 to 7.4.11.</p> |

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|                                    | <p>(d) any other habitats and wildlife groups identified as having special conservation interest by this EIA study.</p> <p>(vi) using suitable methodologies (including but not limited to those adopted in other relevant EIA studies in Hong Kong), and considering also any works activities from other projects reasonably likely to occur at the time, identify and quantify as far as possible any direct, indirect, on-site, off-site, primary, secondary and cumulative ecological impacts on the wildlife groups and habitats identified such as direct loss of habitats, potential diversion or modification of stream courses, disturbance to wildlife, destruction of habitats, reduction of species abundance/diversity, loss of feeding and breeding grounds, reduction of ecological carrying capacity and habitat fragmentation, in particular the following:</p> <p>(a) impacts to subtidal organisms especially corals during construction and operation phases due to habitat loss, potential changes in water quality and hydrodynamics properties;</p> <p>(b) impacts to CWDs and their prey resources during construction and operation phases due to potential changes in water quality, hydrodynamic properties, marine traffic volume, and underwater noise; and</p> <p>(c) cumulative impacts due to other planned and committed concurrent development projects (e.g. 3RS, HKBCF, HKLR, TCNTE) at or near the Project area.</p> <p>(vii) evaluate ecological impact based on the best and latest information available during the course of the EIA study, using quantitative approach as far as practicable and covering construction and operational phases of the Project;</p> <p>(viii) recommend possible and practicable mitigation measures to avoid, minimise and/or compensate for the adverse ecological impacts identified during construction and operation of the Project;</p> <p>(ix) evaluate the feasibility and effectiveness of the recommended mitigation measures and define the scope, type, location, implementation arrangement, resource requirement,</p> | <p>Information on intertidal communities within assessment area, including survey findings of intertidal communities is described in Sections 7.4.8, 7.4.31 to 7.4.34.</p> <p>Potential ecological impacts of habitat loss, potential changes in water quality and hydrodynamics properties arising from this Project during construction and operational phases on subtidal organisms, particularly coral colonies are presented in Sections 7.6.5, 7.6.7, 7.6.8, and 7.6.12 to 7.6.20.</p> <p>Ecological impacts of potential changes in water quality, hydrodynamic properties, marine traffic volume, and underwater noise arising from this Project during construction and operational phases on CWDs and their prey resources are presented in Sections 7.6.5, 7.6.6, 7.6.8, 7.6.9 to 7.6.20.</p> <p>Cumulative ecological impacts due to other planned and committed concurrent development projects (e.g. 3RS, HKBCF, HKLR, TCNTE) at or near the Project area are detailed in Sections 7.7.1 to 7.7.8, and in Table 7.17.</p> <p>Ecological impacts is evaluated in Sections 7.6.1 to 7.6.20 as well as Table 7.16 based on the best and latest information available during the course of the EIA study, using quantitative approach as far as practicable and covering construction and operational phases of the Project.</p> <p>Possible and practicable mitigation measures to avoid, minimise and/or compensate for the adverse ecological impacts identified during construction and operation of the Project are recommended in Sections 7.8.1 to 7.8.10.</p> <p>The feasibility and effectiveness of the recommended mitigation measures are evaluated in Sections 7.8.2 7.8.10. The</p> |



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|                                    | <p>subsequent management and maintenance of such measures;</p> <p>(x) determine and quantify as far as possible the residual ecological impacts after implementation of the proposed mitigation measures;</p> <p>(xi) evaluate the significance and acceptability of the residual ecological impacts using well-defined criteria in Annex 3 of the TM; and</p> <p>(xii) review the need for and recommend any ecological monitoring programme required.</p>  | <p>scope, type, location, implementation arrangement, resource requirement, subsequent management and maintenance of such measures have also been defined in the same sections and Appendix 10.1.</p> <p>The residual ecological impacts after implementation of the proposed mitigation measures are determined and identified in Section 7.9.1 as far as possible.</p> <p>The significance and acceptability of the residual ecological impacts are evaluated in Section 7.9.1 according to the defined criteria in Annex 3 of the TM.</p> <p>The need for ecological monitoring programme is reviewed and recommended in Sections 7.10.1 and 7.10.2.</p>                                      |
| Appendix F                         | Requirements for Landscape and Visual Impact Assessments   |  |
| 1.                                 | <p>The Applicant shall review relevant outline development plan(s), outline zoning plan(s), layout plan(s) and/or studies which may identify areas of high landscape value, open space, amenity area, conservation area and green belt designations. Any guidelines on landscape and urban design strategies and frameworks that may affect the appreciation of the Project shall also be reviewed. The aim is to gain an insight to the fixture outlook of the area affected so as to assess whether the Project can fit into the surrounding setting based on a comparison of the scenarios with and without the Project. Any conflict with the statutory town plan(s) and any published land use plan(s) shall be highlighted and appropriate follow-up action shall be recommended. A system shall be derived for judging the landscape and visual impact significance as required under the Annexes 10 and 18 of the EIAO-TM and the EIAO Guidance Note No. 8/2010 "Preparation of Landscape and Visual Impact Assessment under the EIAO". Cumulative landscape and visual impacts of the Project with other existing, committed and planned developments in the assessment area shall be assessed.</p> | <p>In Section 8.2, related documents and information have been reviewed including Annexes 10 and 18 of the EIAO-TM and the EIAO Guidance Note No. 8/2010. Cumulative impacts have been assessed and presented in Section 8.11.</p> <p>A brief discussion to assess whether the project can fit into the surrounding setting is provided on how land uses will be affected according to the OZP in Section 8.5. Nil conflict with statutory town plan(s) was concluded.</p>   |
| 2.                                 | <p>The Applicant shall assess the landscape impact of the Project. The Applicant shall describe, appraise, analyse and evaluate the existing and planned landscape resources and characters of the assessment area including those landscape design proposed under the HKBCF and 3RS Projects. Annotated-oblique aerial photographs and plans of suitable scale showing the baseline landscape resources and landscape character areas and mapping of impact assessment shall be extensively used to present the findings of impact assessment. Descriptive text shall provide a concise and reasoned judgment from a landscape point of view. The assessment shall be particularly focused on the sensitivity of the landscape framework and its ability to accommodate change. The Applicant shall identify the degree of compatibility of the Project with the existing and planned landscape setting and scenic spot. The landscape impact assessment shall quantify potential landscape impact as far as possible, so as to illustrate the significance of such impact arising from the Project. Clear mapping of the landscape impact is required.</p>   | <p>Landscape Resources plan and photos are shown in Figures 8.2 and 8.4 respectively, while Landscape Character Areas plan and photos are shown in Figures 8.3 and 8.4 respectively. Landscape baseline study with broad brush tree survey and the landscape impact assessment are discussed in Sections 8.6 and 8.7.</p> <p>All existing and planned landscape resources (LRs) and landscape character areas (LCAs) have been identified, analysed and discussed as part of the baseline conditions in Section 8.6.</p> <p>A system to assess landscape impact significance as required under the TM and EIAO Guidance Note No. 8/2010 has been derived and is provided in Sections 8.3 and</p> |

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|                                    |                       | <p>8.4.</p> <p>Descriptive text (Section 8.7) and annotated plans and photographs of various landscape resources and landscape character areas have been provided in Figures 8.2 to 8.7. The illustration of the landscape impact significance are also provided in Figures 8.2 to 8.7 and Appendix 8.1.</p> <p>The Landscape impact assessment is based on:</p> <ol style="list-style-type: none"> <li>1. Sensitivity of the receiver - This is influenced by a number of factors including whether the resource/character is common or rare, whether it is considered to be of local, regional, national or global importance, whether there are any statutory or regulatory limitations / requirements relating to the resource, the quality of the resource / character, the maturity of the resource, and the ability of the resource/character to accommodate change.</li> <li>2. Magnitude of change - The magnitude of the change depends on a number of factors including the physical extent of the change, the landscape and visual context of the change – i.e. a set circumstance/facts surrounding the change, the compatibility of the project with the surrounding landscape; and the time-scale of the change - i.e. whether it is temporary (short, medium or long term), permanent but potentially reversible, or permanent and irreversible.</li> </ol> <p>By synthesising the magnitude of the various changes and the sensitivity of the various landscape resources it is possible to categorise impacts in a logical, well-reasoned and consistent fashion. The landscape impact significance for all LRs and LCAs are stated in Table 8.7. Quantification of impacts is provided as far as practicable.</p> <p>A broad tree survey was undertaken within the project site boundary. The survey includes tree group survey data and tree group plans recording approximate numbers of trees as stated in Section 8.6.4. Appendix 8.1 identify the tree groups surveyed and illustrate the tree impacts.</p> <p>Cumulative landscape and visual impacts of the project with other existing, committed and planned developments within the study area have been identified and assessed in Sections 8.11.</p> |

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| 3.                                 | <p>The Applicant shall assess the visual impact of the Project. Clear illustrations including mapping of visual impact is required. Descriptive text shall provide a concise and reasoned judgment from a visual point of view. Cumulative visual impact of the Project with other existing, committed and planned developments in the assessment area shall be assessed. The assessment shall include the following:</p> <ul style="list-style-type: none"> <li>(i) identification and plotting of visual envelope of the Project;</li> <li>(ii) identification of the key groups of existing and planned sensitive receivers within the visual envelope with regard to views from sea level, ground level and elevated vantage points;</li> <li>(iii) description of the visual compatibility of the Project with the surrounding and the existing and planned setting, and its obstruction and interference with the key views within the visual envelope;</li> <li>(iv) identification and description of the severity of visual impact in terms of nature, distance and number of sensitive receivers. The visual impact of the Project with and without mitigation measures shall be included and illustrated so as to demonstrate the effectiveness of the proposed mitigation measures across time; and</li> <li>(v) evaluations and explanations of factors considered in arriving the significance thresholds of visual impact.</li> </ul> | <p>The visual impacts of the proposed project have been assessed in Section 8.7 and clear mapping of the visual impacts are also provided in Figures 8.5 to 8.7. Identification and plotting of visual envelope of the project is provided in Figure 8.5. Key existing and planned VSRs including residential, recreational, transient and occupational VSRs have been identified and assessed in Section 8.4. Vantage points at ground and elevated levels and short and long distances have been discussed and identified in Section 8.8.</p> <p>The visual impact assessment is based on:</p> <p>1. Sensitivity of the receiver - The type of VSRs, classified according to whether the person is at home, at work, at play, or travelling. Those who view the impact from their homes are considered to be highly sensitive as the attractiveness or otherwise of the outlook from their home will have a substantial effect on their perception of the quality and acceptability of their home environment and their general quality of life. Those who view the impact from their workplace are considered to be only moderately sensitive as the attractiveness or otherwise of the outlook will have a less important, although still material, effect on their perception of their quality of life. The degree to which this applies depends on whether the workplace is industrial, retail or commercial. Those who view the impact while taking part in an outdoor leisure activity may display varying sensitivity depending on the type of leisure activity. Those who view the impact while travelling on a public thoroughfare will also display varying sensitivity depending on the speed of travel. Other factors which are considered (as required by EIAO GN 8/2010) include the value and quality of existing views and views from planned developments, the availability and amenity of alternative views, the duration or frequency of view, and the degree of visibility.</p> <p>2. Magnitude of change - Factors considered include: Duration and Frequency of the impact; Reversibility of the impact; Compatibility of the project with the Visual Backdrop, Distance of the source of impact from the viewer, Degree of visibility of Source(s) of Visual Impact, Scale of the development and Potential Blockage of Existing Views.</p> <p>By synthesising the magnitude of the various visual changes and the sensitivity of the VSR, and the number of individuals in the</p> |

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|                                    |   | <p>VSR that are affected, it is possible to categorise the degree of significance of the impacts in a logical, well-reasoned and consistent fashion. The visual impact of the project with and without mitigation measures has been assessed in Section 8.10.</p> <p>Clear evaluations and explanation with supportive arguments of all relevant factors considered in arriving at the significance thresholds of visual impacts have been discussed in Sections 8.8 and 8.10.</p>  |
| 4.                                 | <p>The Applicant shall evaluate the merits of preservation in totality, in parts or total destruction of existing landscape and the establishment of a new landscape character area. In addition, alternative location, site layout, development options, design and construction methods that would avoid or reduce the identified landscape and visual impacts shall be considered and evaluated for comparison before adopting other mitigation or compensatory measures to alleviate the impacts. The mitigation measures proposed shall not only be concerned with damage reduction but shall also include consideration of potential enhancement of existing landscape and visual quality. The Applicant shall recommend mitigation measures to minimise adverse effects identified above, including provision of a landscape design and a landscape/visual impact mitigation measure plan.</p> | <p>The Merit and demerit of preservation in totality, in parts or total destruction of existing landscape and the establishment of a new landscape character area are understood to be considered as part of Section 8.</p> <p>Mitigation measure to minimise adverse effects of the proposed project have been proposed in Section 8.9 of the EIA report.</p> <p>The need to 'include consideration of potential enhancement of the existing landscape and visual quality' are provided in OM1 - Aesthetically Pleasing Design of Aboveground / Above Sea Structures and OM2 – Provision of Amenity Planting.</p> <p>A landscape and visual mitigation arrangement has been provided in Figures 8.12 and 8.13 as well.</p> |
| 5.                                 | <p>The mitigation measures shall include preservation of vegetation, and natural landscape resources, transplanting of mature trees, provision of screen planting using native trees, provisioning/reprovisioning of amenity areas and open spaces, design and layout of structures, provision of finishes to structures, colour scheme and texture of material used and any measures to mitigate the impact on existing and planned land uses and sensitive receivers. Parties shall be identified for the ongoing management and maintenance of the proposed mitigation works to ensure their effectiveness throughout the construction phase and operational phase of the Project. A practical programme for the implementation of the recommended measures shall be provided.</p>   | <p>Various mitigation measures are presented in Section 8.9 and Table 8.10.</p> <p>Mitigation measures CM1 to CM3 and OM2 relate to preservation of vegetation, tree transplanting, provisioning/re-provisioning of amenity areas etc.</p> <p>Design of structure, provision of finishes to structure, colour scheme and texture of material are reflected in mitigation measures OM1.</p> <p>The management and maintenance parties for the proposed mitigation measures have been identified in Table 8.10. The funding and implementation agencies have been identified in Table 8.10 as well.</p>   |
| 6.                                 | <p>Annotated illustrations such as coloured perspective drawings, plans and section/elevation diagrams, oblique aerial photographs, photographs taken at vantage points, and computer-generated photomontage shall be adopted to fully illustrate the landscape and visual impacts of the Project. The landscape and visual impacts of the Project with and without mitigation measures from representative viewpoints, particularly from views of the most severely affected visually sensitive receivers (i.e. worst-case</p>   | <p>Annotated VSR photos are shown in Figures 8.6 and 8.7. Photomontages illustrated existing and planned setting of four different stages (i.e. existing conditions, unmitigated impacts at Day 1, mitigated impacts at Day 1 and residual impact at Year 10) are shown in Figures 8.8 to 8.11.</p>   |

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|                                    | scenario), shall be properly illustrated in existing and planned setting at four stages (existing condition, Day 1 with no mitigation measures, Day 1 with mitigation measures and Year 10 with mitigation measures) by computer-generated photomontage so as to demonstrate the comparison of scenarios with and without the Project and the effectiveness of the proposed mitigation measures. Computer graphics shall be compatible with Microstation DGN file format. The Applicant shall record the technical details in preparing the illustrations, which may need to be submitted for verification of the accuracy of the illustrations.   |  |
| Appendix G                         | Requirements for Cultural Heritage Impact Assessment   |  |
|                                    | <p><u>Marine Archaeological Investigation (MAI)</u></p> <p>(a) The Applicant shall engage a qualified marine archaeologist to conduct a marine archaeological review based on the best available information to identify whether there is any potential existence of sites or objects of cultural heritage within the seabed that will be affected by the marine works of the Project, whether the identified issues can be mitigated and whether there is a need for more detailed investigation. The review can take into account the scope and nature of proposed marine works, the results of previous marine archaeological investigations, the dredging history and other diving records, etc. The assessment area shall include all areas to be affected by the marine works of the Project.</p> <p>(b) If marine archaeological potential is identified and the need for further investigation is confirmed, a MAI shall be carried out to ascertain the archaeological value of the affected seabed area. The Applicant shall propose a programme of investigation, including the scope of works, methodology and time schedule, etc. for agreement with the Director. The MAI shall be carried out by a qualified marine archaeologist who shall obtain a licence from the Antiquities Authority under the provision of the Antiquities and Monuments Ordinance (Cap.53). If significant archaeological remains are identified, mitigation measures shall be designed and implemented in consultation with the Antiquities and Monuments Office.</p> | <p>A marine archaeological review is conducted, their results are presented in Sections 9.4 to 9.6 and confirmed that proposed marine construction works will not affect sites or objects of cultural heritage within seabed of the Project Area.</p> <p>Section 9.4 includes a baseline review on the background of the scope and nature of the proposed marine construction works. Sections 9.5 and 9.6 present the review of the results obtained from the previous marine archaeological investigations.</p> <p>A marine archaeological review is carried out and presented in Sections 9.4 and 9.5. Based on the review result and marine archaeological impact assessment presented in Sections 9.6.9 and 9.7.3, no marine archaeological potential is identified thus no further MAI is needed to be carried out.</p> |
| 2.                                 | The Applicant shall draw necessary reference to relevant sections of the "Guidelines for Marine Archaeological Investigation" at Appendix G-1 for detailed requirement.  | The GMAI is referred in Section 9.2.5 of the report. At the same time, Sections 9.4, 9.5, and 9.7 are written in response to fulfill the requirement of Tasks 1-3 of GMAI.   |
| Appendix G-1                       | <p>Guidelines for Marine Archaeological Investigation (MAI) (as at October 2010)</p> <p>The standard practice for MAI should consist of four separate tasks, i.e. (1) Baseline Review, (2) Geophysical Survey, (3) Establishing Archaeological Potential and (4) Remote Operated Vehicle (ROV)/Visual Diver Survey/Watching Brief. Marine archaeologists should make reference to the standard and guidance of the Institute for Archaeologists and English Heritage to carry out MAI.</p>   | <p>Sections 9.4, 9.5, and 9.7 are presented the review result of previous MAI reports which are written in response to Tasks 1-3 of GMAI.</p> <p>Based on the result of the impact assessment in Section 9.7.2, no marine archaeological site or object is identified thus further MAI is not considered as necessary.</p>   |
| 1.                                 | Baseline Review  |  |
| 1.1                                | A baseline review should be conducted to collate the existing information in order to identify the potential for archaeological resources and, if identified, their likely character, extent, quality and value.   | A baseline review is conducted and presented in Section 9.4.   |

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| 1.2                                | <p>The baseline review will focus on known sources of archive data. It will include:</p> <ul style="list-style-type: none"> <li>(a) Geotechnical Engineering Office (GEO) — the Department holds extensive seabed survey data collected from previous geological research.</li> <li>(b) Marine Department, Hydrographic Office - the Department holds a substantial archive of hydrographic data and charts.</li> <li>(c) The Royal Naval Hydrographic Department in the UK - the Department maintains an archive of all survey data collected by naval hydrographers.</li> <li>(d) Relevant government departments should be consulted in order to obtain the information of dredging history (if any) on the proposed Project area. Area for sand dredging, mud disposal and allocated marine borrow area within Hong Kong should also be considered during the review.</li> </ul>  | <p>The list of the known sources of archive data (a) to (c) is presented in Section 9.3.1 of Assessment Methodology of this marine archaeological review. Such data sources are considered and reviewed, and the results are presented in Section 9.4.</p> <p>For (d), it is not applicable to this project.</p>  |
| 1.3                                | <p>The above data sources will provide historical records and more detailed geological analysis of submarine features which may have been subsequently masked by more recent sediment deposits and accumulated debris.</p>  | <p>The above data sources are considered and reviewed, and the results are presented in the marine archaeological review in Section 9.4.</p>  |
| 2.                                 | Geophysical Survey  |   |
| 2.1                                | <p>Extensive geophysical survey of the study area should deploy high resolution boomer, side scan sonar, an echo sounder and high resolution multi beam sonar. The multi beam data must be presented as processed digital terrain models to facilitate the archaeological analysis. The data received from the survey would be analysed in detail to provide:</p> <ul style="list-style-type: none"> <li>(a) Exact definition of the areas of greatest archaeological potential.</li> <li>(b) Assessment of the depth and nature of the seabed sediments to define which areas consist of suitable material to bury and preserve archaeological material.</li> <li>(c) Detailed examination of the boomer and side scan sonar records to map anomalies in and on the seabed which may be archaeological material.</li> <li>(d) Detailed examination of the multi beam sonar data to assess the archaeological potential of the sonar contacts.</li> </ul> | <p>The geophysical surveys which had deployed high resolution boomer, side scan sonar, echo sounder and high resolution multi beam sonar within and in the vicinity of the study area by previous MAIs. The data of these geophysical surveys are reviewed and presented in Sections 9.5 and 9.6.</p> <p>The areas of greatest archaeological potential from the previous geophysical surveys are reviewed and presented in Sections 9.5 and 9.6.</p> <p>The assessment of the depth and nature of the seabed sediments are presented in Sections 9.6.4 to 9.6.6.</p> <p>Detailed examination of the boomer and side scan sonar records have been studied throughout the 3 previous MAIs and the results are presented in Sections 9.5 and 9.6.</p> <p>Detailed examination of the multi beam sonar data have been done in the 2 MAIs in 2008 and the results are presented in Sections 9.5.4 to 9.5.8 and 9.6.</p> |
| 3.                                 | Establishing Archaeological Potential   |   |
| 3.1                                | <p>The data examined during Task 1 and 2 will be analysed to provide an indication of the likely character and extent of archaeological resources within the study area. This would facilitate formulation of a strategy for investigation.</p>   | <p>Task 1 and Task 2 are presented in Section 9.4 and Sections 9.5 and 9.6 respectively. The archaeological potential is reviewed and presented in Sections 9.7.1 to 9.7.2.</p>   |
| 3.2                                | <p>The results would be presented as a written report and charts. If there is no indication of archaeological material there would be no need for further work.</p>   | <p>Based on the assessment presented in Section 9.7.1 to 9.7.2 and 9.8.1, no further MAI is required. Such result is presented in Section 9.8.</p>  |
| 3.3                                | <p>Charts should be presented at the most appropriate scale and show each survey contact. Its dimensions and exact location</p>   | <p>As there is no impact assessed and no further MAI is required, no chart is needed to</p>   |

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|------------------------------------|---|---|---|---------------------------------|---|--------------------------------|--|--------------------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
|                                    | should also be shown.   | be provided.  |   |                                 |   |                                |  |                                |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 4.                                 | ROV/Visual Diver Survey/Watching Brief  |   |   |                                 |   |                                |  |                                |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 4.1                                | Subject to the outcome of Task 1, 2 and 3, accepted marine archaeological practice would be to plan a field evaluation programme to acquire more detailed data on areas identified as having archaeological potential. The areas of archaeological interest can be inspected by ROV or divers. ROV or a team of divers with both still and video cameras would be used to record all seabed features of archaeological interest.  | Subjected to the review result from Tasks 1 to 3, Task 4 is not required to be conducted. |   |                                 |   |                                |  |                                |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 4.2                                | Owing to the heavy marine traffic in Hong Kong, the ROV/visual diver survey may not be feasible to achieve the target. If that is the case, an archaeological watching brief is the most appropriate way to monitor the dredging operations in areas of identified high potential to obtain physical archaeological information.  | N/A   |   |                                 |   |                                |  |                                |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 4.3                                | A sampling strategy for an archaeological watching brief would be prepared based on the results of Task 1, 2 and 3 to focus work on the areas of greatest archaeological potential. Careful monitoring of the dredging operations would enable immediate identification and salvage of archaeological material. If archaeological material is found, the AMO should be contacted immediately to seek guidance on its significance and appropriate mitigation measures would be prepared.  | N/A   |   |                                 |   |                                |  |                                |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 4.4                                | If Task 4 is undertaken, the results would be presented in a written report with charts.  | Task 4 is not taken thus no written report is needed to be provided.                      |   |                                 |   |                                |  |                                |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 5.                                 | Report  |   |   |                                 |   |                                |  |                                |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                                    | Five copies of the final report should be submitted to the AMO for record.  | N/A   |   |                                 |   |                                |  |                                |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Appendix H                         | Implementation Schedule of Recommended Mitigation Measures  |   |   |                                 |   |                                |  |                                |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                                    | <table border="1"> <thead> <tr> <th>EIA Ref.</th> <th>EM&amp;A Ref.</th> <th>Recommended Mitigation Measures</th> <th>Objectives of the Measures &amp; Main Concerns to Address</th> <th>Who to implement the measure?</th> <th>Location of the measure</th> <th>When to implement the measure?</th> <th>What standards or requirements for the measure to achieve?</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>   | EIA Ref.  | EM&A Ref.   | Recommended Mitigation Measures | Objectives of the Measures & Main Concerns to Address | Who to implement the measure?  | Location of the measure                                    | When to implement the measure? | What standards or requirements for the measure to achieve? |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | Appendix 10.1 follows the same presentation. |
| EIA Ref.                           | EM&A Ref.   | Recommended Mitigation Measures   | Objectives of the Measures & Main Concerns to Address | Who to implement the measure?   | Location of the measure                               | When to implement the measure? | What standards or requirements for the measure to achieve? |                                |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                                    |   |   |   |                                 |   |                                |  |                                |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                                    |   |   |   |                                 |   |                                |  |                                |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Appendix I                         | Requirements for EIA Report Documents   |   |   |                                 |   |                                |  |                                |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1.                                 | The Applicant shall supply the Director with the following number of copies of the EIA report and the executive summary:<br>(i) 30 copies of the EIA report and 30 copies of the executive summary (each bilingual in both English and Chinese) as required under Section 6(2) of the EIAO to be supplied at the time of application for approval of the EIA report.<br>(ii) When necessary, addendum to the EIA report and the executive summary submitted in item (i) above as required under Section 7(1) of the EIAO, to be supplied upon advice by the Director for public inspection.<br>(iii) 20 copies of the EIA report and 50 copies of the executive summary (each bilingual in both English and Chinese) with or without Addendum as required under Section 7(5) of the EIAO, to be supplied upon advice by the Director for consultation with the Advisory Council on the Environment. | Noted.<br><br>Noted.<br><br>Noted.  |   |                                 |   |                                |  |                                |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2.                                 | In addition, to facilitate public inspection of EIA report via EIAO Internet Website, the Applicant shall provide electronic copies of both the EIA report and executive summary prepared in Hyper Text Markup Language (HTML) and in Portable Document Format (PDF), unless otherwise agreed by the Director. For both of the HTML and PDF versions, a content page capable of providing   | Noted.  |   |                                 |   |                                |  |                                |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

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|                                    | <p>hyperlink to each section and sub-section of the EIA report and executive summary shall be included in the beginning of the document. Hyperlinks to figures, drawings and tables in the EIA report and executive summary shall be provided in the main text from where respective references are made. The EIA report, including drawings, tables, figures and appendices shall be viewable by common web-browsers including Internet Explorer 8, Firefox 23, Chrome and Safari 8 or later versions as agreed by the Director, and support languages including Traditional Chinese, Simplified Chinese and English.</p> |                  |
| 3.                                 | <p>The electronic copies of the EIA report and the executive summary shall be submitted to the Director at the time of application for approval of the EIA report.</p>   | Noted.           |
| 4.                                 | <p>When the EIA report and the executive summary are made available for public inspection under Section 7(1) of the EIAO, the content of the electronic copies of the EIA report and the executive summary must be the same as the hard copies and the Director shall be provided with the most updated electronic copies.</p>   | Noted.           |
| 5.                                 | <p>To promote environmentally friendly and efficient dissemination of information, both hardcopies and electronic copies of future EM&amp;A reports recommended by the EIA study shall be required and their format shall be agreed by the Director.</p>   | Noted.           |



### Checklist for Annex 11 of EIAO-TM – Content of Environmental Impact Assessment (EIA) Report

| Specific Requirements   | Compliance Check  |
|---|---|
| <u>EXECUTIVE SUMMARY IN ENGLISH AND CHINESE</u>   |   |
| - Summary of main issues, findings, conclusions and recommendations   | The Executive Summary contains a summary of each technical aspect including the findings, conclusions and recommendations from each environmental assessment.   |
| <u>INTRODUCTION</u>   |   |
| - Background of the project   | The background of the project is presented in Section 1.1.  |
| - Purpose of the EIA study  | The purpose of the EIA Study is presented in Section 1.3.   |
| - The approach  | The approach of the study follows that of the EIAO-TM and EIA Study Brief requirements as described in Sections 1.2, 1.3 and 1.4.   |
| <u>DESCRIPTION OF THE PROJECT</u>   |   |
| - Key project requirements  | The key project requirements are presented in Section 2.1.  |
| - Site location and site history  | The project site is situated between the HKBCF Island and the HKIA, at the south of the existing SkyPier on the Airport Island. The history is presented in Section 2.1.  |
| - Nature, scope and benefits of the project   | The project includes a marine section approximately 360 m in length, supported by bridge concrete piers and a land section approximately 210 m, span over the HKBCF Island. These are described in Section 2.2.1. The nature and scope of the project are presented in Sections 1.1.1 to 1.1.3, and 2.1, while benefits of the project include provided a seamless and hassle-free connection between the ITT of HKIA and HKBCF Island to facilitate the international modal travel of air passengers, in line with and further strengthening HKIA's strategic positioning and function as an international aviation hub in the region. These are presented in Section 2.3. |
| - Size or scale, shape and design of the project  | The size or scale, shape and design are presented in Section 2.2.   |
| - Project timetable and phasing of the project  | No phasing is required for this project, the works programme is presented in Section 2.10.  |
| - Means by which the project will be implemented  | The construction methods and engineering requirements are presented in Section 2.9.   |
| - Any related projects  | Other projects that may have interface with this project are presented in Section 2.11.   |
| - Type, scope, scale, frequency and duration of the construction, operational or decommissioning (if relevant) activities | The type, scope, scale, frequency and duration of construction activities are presented in Sections 2.9 to 2.10, while the scope of operational activities is presented in Section 2.2.   |
| - Background and history of the project, including  | The background and history of the project are presented in  |

| Specific Requirements  | Compliance Check   |
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| considerations given to different options, and the project's different siting or alignment | Sections 1.1.1 to 1.1.3, and 2.4. Consideration of different options is presented Section 2.6. The selected option of the project is described in Section 2.7.   |
| - Description of scenarios with or without the project                                     | Scenarios with and without the project has been evaluated in Sections 2.4 to 2.8.  |
| <u>ENVIRONMENTAL LEGISLATION, POLICIES, PLANS, STANDARDS AND CRITERIA</u>                  |  |
| - Applicable environmental ordinances and regulations                                      | Air Quality – Section 3.2 lists the applicable legislations, policies, plans, standards and criteria adopted, while Sections 3.2.3 to 3.2.5 specially list those applicable for construction phase.<br><br>Noise Impact – Section 4.2 lists the applicable legislations, policies, plans, standards and criteria adopted for assessment of construction noise, fixed plant noise, road traffic noise.<br><br>Water Quality – Sections 5.2.1, 5.2.3 to 5.2.5 list and describe the applicable legislations, policies, plans, standards adopted for water quality impact assessment, while Section 5.2.2 presents the assessment criteria adopted.<br><br>Waste Management Implications – The applicable legislations, policies, plans, standards and criteria relevant to waste management are listed and described in Section 6.2.<br><br>Marine Ecological Impact – Section 7.2 outlines the applicable legislations, standards and guidelines providing the framework of protection of species and habitats of marine ecological importance.<br><br>Landscape and Visual Impact – Section 8.2 lists the applicable legislations, standards and guidelines for the landscape and visual impact assessment under construction and operation phase.<br><br>Impact of Cultural Heritage – The legislations, standards and guidelines relevant to marine archaeology adopted in the Study are presented and described in Section 9.2. |
| - Applicable government environmental policies and plans                                   |  |
| - Applicable environmental standards and criteria  |  |
| - Other references   |  |
| <u>DESCRIPTION OF THE ENVIRONMENT</u>  |  |
| - Baseline environmental conditions  | Air Quality – Air baseline conditions and discussion on future trends are presented in Sections 3.3.2 to 3.3.4.  |
| - Environmental trends   | Noise Impact – Description of the noise environment is given in Section 4.3.2.<br><br>Water Quality – EPD's baseline water quality is presented in Sections 5.4.1 to 5.4.2.<br><br>Waste Management Implications – Description of existing environment and current waste source is given in Section 6.3.<br><br>Marine Ecological Impact – Discussion and evaluation on existing environment and baseline ecological value based   |

| Specific Requirements  | Compliance Check   |
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|  | <p>on literature reviews and ecological surveys are given in Sections 7.4, 7.5.2 to 7.5.5.</p> <p>Landscape and Visual Impact – the baseline conditions in terms of landscape resources, landscape character areas, a broad brush tree survey, visual envelope and visually sensitive receivers are discussed in Section 8.6.</p> <p>Impact of Cultural Heritage – Description of baseline conditions and archaeological background are given in Section 9.4.</p>  |
| <u>DESCRIPTION OF ASSESSMENT METHODOLOGIES</u>   |  |
| <ul style="list-style-type: none"> <li>- Assessment methodologies, assumptions and criteria, including sample calculations and input and output files of a typical model run for all mathematical modelling</li> </ul>   | <p>Air Quality – No adverse air quality impact is anticipated in construction phase of the project and no operational air quality impact is expected, qualitative assessment approach was adopted as presented in Section 3.5.</p> <p>Noise Impact – No adverse noise impact will be generated from the construction and operation of the project.</p> <p>Water Quality – The methodology for water quality impact assessment during operation phase is given in Section 5.6. No adverse water quality impact is expected during construction phase.</p> <p>Waste Management Implications – The assessment method for waste related activities associated with the project including analysis of construction / operation phase activities and waste generation, estimation of waste quantities and development of proposals for waste management are described in Section 6.4.1.</p> <p>Marine Ecological Impact – The assessment methodology is given in Sections 7.3.2 to 7.3.13.</p> <p>Landscape and Visual Impact – The landscape and visual impact assessment methodology including the method for identifying the magnitude and significance of impacts are given in Sections 8.3 and 8.4 respectively.</p> <p>Impact of Cultural Heritage – The assessment methodology including methodology for conducting marine archaeological review is given in Section 9.3.</p> |
| <u>IDENTIFICATION OF ENVIRONMENTAL IMPACTS</u>   |  |
| <ul style="list-style-type: none"> <li>- Potential environmental impacts including the types, characteristics and estimated quantities of emissions, discharges, wastes, potential risks, disturbances or displacement associated with the activities relating to the project during construction, operation and decommissioning phases</li> </ul> | <p>Air Quality – Air sensitive receivers are presented in Section 3.4.4 and shown in Figure 3.1. The potential sources of construction and operational phase air quality impacts are identified in Section 3.5.</p> <p>Noise Impact – Noise sensitive receivers are identified in Table 4.4 and shown in Figure 4.1. Since no existing and planned NSRs which rely on opened windows for ventilation is identified within the assessment area as presented in Section 4.5.1, there will be no adverse noise impact generated from the construction and operation of the project.</p>   |
| <ul style="list-style-type: none"> <li>- Description of resources or receivers which are vulnerable to change or environmental impacts</li> </ul>  | <p>Water Quality – Potential water quality impacts associated</p>  |

| Specific Requirements   | Compliance Check   |
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|   | <p>with the project during construction and operation phases are described in Section 5.5. Water sensitive receivers are identified and listed in Section 5.3 and shown in Figure 5.1.</p> <p>Waste Management Implications – Both construction phase and operation phase waste activities and impacts have been identified in Section 6.4. Construction phase impacts considered include waste from C&amp;D materials, chemical waste, general refuse, excavated sediment and potential floating refuse. Operation phase impacts identified include chemical waste and MSW.</p> <p>Marine Ecological Impact – The identification of potential impacts and potential affected ecological resources during construction and operation phases are given in Section 7.6.</p> <p>Landscape and Visual Impact – The potentially affected landscape resources, landscape character areas and visually sensitive receivers are identified and described in Section 8.6, Table 8.4, Table 8.5, Table 8.6, Figure 8.2, Figure 8.3 and Figure 8.5. Potential sources of impacts are identified in Sections 8.7.1 to 8.7.2, Sections 8.8.1 to 8.8.3.</p> <p>Impact of Cultural Heritage – The identification of archaeological potential that may be affected by the project within and in the vicinity of the project area with reference to previous archaeological survey studies is given in Section 9.5.</p> |
| <u>PREDICTION AND EVALUATION OF ENVIRONMENTAL IMPACTS</u>   |  |
| <ul style="list-style-type: none"> <li>- Prediction of environmental impacts (including beneficial or adverse; direct or indirect; short term or long term; reversible or irreversible; transboundary; cumulative)</li> </ul> | <p>Air Quality – The prediction and evaluation of construction and operation phase air quality impacts are presented in Section 3.6.</p>   |
| <ul style="list-style-type: none"> <li>- Evaluation of predicted environmental impacts against applicable environmental legislation, policies, plans, standards and criteria</li> </ul>                                       | <p>Noise Impact – Since no existing and planned NSRs which rely on opened windows for ventilation is identified within the assessment area, there will be no adverse noise impact generated from the construction and operation of the project. The evaluation of noise impact from the project is presented in Section 4.5.</p> <p>Water Quality – The predicted water quality impacts for both construction and operational phases are evaluated and presented in Section 5.7.</p> <p>Waste Management Implications – Based on the identified waste types and waste generating activities, the quantities and potential impacts associated with each type of waste has been assessed and described in Section 6.4. Reference has been made to applicable standards and requirements.</p> <p>Marine Ecological Impact – The evaluation of marine ecological impact is given in Section 7.6.</p> <p>Landscape and Visual Impact – Landscape impacts before and after mitigation during construction and operation</p>  |

| Specific Requirements  | Compliance Check  |
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|  | <p>phases have been predicted and evaluated in Section 8.7, 8.10.1 to 8.10.6 respectively. Visual impacts are evaluated and presented in Section 8.8 8.10.7 to 8.10.14.</p> <p>Impact of Cultural Heritage – Evaluation of the impacts on cultural heritage in the study area is presented in Section 9.7. No archaeological potential and built heritage resource is identified within the project area, no impact on cultural heritage is anticipated.</p>  |
| <u>MITIGATION OF ADVERSE ENVIRONMENTAL IMPACTS</u>   |   |
| <ul style="list-style-type: none"> <li>- Measures to eliminate, reduce or remedy adverse environmental impacts</li> </ul>                    | <p>Air Quality – Recommended mitigation measures to be implemented during construction phase are described in Section 3.7.1. No mitigation measure is required during operational phase.</p> <p>Noise Impact – There will be no adverse noise impact generated from the construction and operation of the project. Good site practices recommended during the construction phase are described in Section 4.5.2. No mitigation measures is required during operational phase.</p> <p>Water Quality – Mitigation measures recommended for minimisation of water quality impacts are presented in Section 5.9.</p> <p>Waste Management Implications – Measures have been recommended to reduce and remedy potential waste related impacts due to the project. These include opportunities for reuse / recycling, good site practices and waste reduction / management measures. Details are provided in Section 6.5.</p> <p>Marine Ecological Impact – The recommended mitigation measures to minimise marine ecological impact are given in Section 7.8.</p> <p>Landscape and Visual Impact – Various design, landscaping, and aesthetic improvement measures have been recommended to mitigate landscape and visual impacts. Proposed mitigation measures to be implemented during construction and operation phases for both landscape and visual impacts are presented in Section 8.9, Table 8.10.</p> <p>Impact of Cultural Heritage – No mitigation measures are required as no impacts on cultural heritage are anticipated.</p> |
| <u>DEFINITION AND EVALUATION OF RESIDUAL ENVIRONMENTAL IMPACTS</u>   |   |
| <ul style="list-style-type: none"> <li>- Definition and evaluation of net environmental impacts with mitigation measures in place</li> </ul> | <p>Air Quality – the evaluation shows that no adverse residual impact is anticipated during both construction and operational phases.</p> <p>Noise Impact – No adverse residual impact is anticipated during both construction and operational phases.</p> <p>Water Quality – No adverse residual impact is anticipated during both construction and operational phases.</p>  |

| Specific Requirements   | Compliance Check   |
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|   | <p>Waste Management Implications – With the implementation of the recommended mitigation measures, no adverse residual impact is anticipated during construction and operation phases.</p> <p>Marine Ecological Impact – The residual impacts due to permanent loss of subtidal soft and hard bottom habitats / marine waters with low ecological value after mitigation measures have been assessed and described in Section 7.9.</p> <p>Landscape and Visual Impact – The residual impacts with mitigation measures have been assessed. Those landscape resources, landscape character areas and visually sensitive receivers that would experience residual landscape or visual impacts are described in Section 8.10.</p> <p>Impact of Cultural Heritage – Not applicable as there are no impacts to cultural heritage resources anticipated, and hence, no mitigation measures are required and there will be no residual impact during both construction and operational phases.</p> |
| <u>ENVIRONMENTAL MONITORING AND AUDIT</u>   |  |
| <ul style="list-style-type: none"> <li>- Need for and scope of monitoring and audit</li> <li>- Environmental monitoring and audit requirements, if found to be necessary, and the related environmental monitoring and audit programme</li> </ul>   | <p>The need for environmental monitoring and audit, where applicable, is presented in Section 10.</p> <p>The details relating to the environmental monitoring and audit requirements, methods and programme are presented in the EM&amp;A Manual.</p>  |
| <u>CONCLUSIONS AND RECOMMENDATIONS</u>  | <p>A summary of the conclusions and recommendations arising from each environmental assessment is summarised in Sections 11 and 12.</p>  |
| <u>SCHEDULE OF RECOMMENDED MITIGATION MEASURES</u>  |  |
| <ul style="list-style-type: none"> <li>- A schedule of all mitigation measures recommended in the EIA report, listing out what the mitigation measures are, by whom, when, where and to what requirements, and including the key environmental monitoring and audit requirements</li> </ul> | <p>A schedule of all mitigation measures recommended in the EIA report, including by whom, when, where and to what requirements are tabulated for each technical aspect in the Implementation Schedule as presented in Appendix 10.1.</p>  |
| <u>APPENDIX</u> – Responses to comments received  | <p>Response to comments received from government departments have been provided to the relevant parties separately.</p>  |

### Checklist for Annex 20 of EIAO-TM – Guidelines for the Review of an EIA Report

| TM Issues  | Compliance Check   |
|--|--|
| <p>1. <u>General Approach</u></p> <p>Organisation of the Information</p> <p>1.1 Is information logically arranged in sections?</p> <p>1.2 Is the location of information identified in an index or table of contents?</p> <p>1.3 When information from external sources has been introduced, has a full reference to the source been included?</p> | <p>The EIA has been divided into 12 sections following the order that is presented in the EIA Study Brief. All sections also contain sub sections following a logical order.</p> <p>A table of contents is provided at the beginning of the EIA report.</p> <p>References to external sources adopted by individual sections are listed within or at the end of each individual section.</p>   |
| <p>Presentation of Information</p> <p>1.4 Has information and analysis been offered to support all conclusions drawn?</p>  | <p>Air Quality – Background information, methodology, evaluation of impact have been given in Section 3. Conclusion presented in Section 3.10 is drawn with the support of the above mentioned items.</p> <p>Noise – Conclusion presented in Section 4.7 is drawn from the findings of noise impact assessment, where qualitative analysis has been carried out as detailed in Section 4.</p> <p>Water Quality – Conclusion presented in Section 5.12 is drawn from the findings of the water quality impact assessment. Quantitative results support the findings from the quantitative analysis, while information based on past project references and proposed / committed methods and practices have been provided to support the conclusion of the qualitative analysis, as detailed in Section 5.</p> <p>Waste – Conclusion presented in Section 6.8 is drawn from the findings of the waste management implication assessment. Quantity, quality and timing of waste generation from construction phase (inert C&amp;D materials, non-inert C&amp;D materials, excavated sediment, chemical waste, general refuse and floating refuse) are discussed in Sections 6.4.2 to 6.4.30. Sections 6.4.33 to 6.4.38 cover quantity, quality and timing of waste generation from operation phase (chemical waste and MSW).</p> <p>Marine Ecology – Conclusion presented in Section 7.11 is drawn from the analysis of information</p> |

| TM Issues  | Compliance Check  |
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| <p>1.5 Has information and analysis been presented so as to be comprehensive to the non-specialist using maps, tables and graphical material as appropriate?</p> | <p>gathered from literature review of approved EIAs and EM&amp;A reports, published and unpublished scientific studies, updated ecological field survey for the project, and marine traffic impact assessment. The impact evaluation of marine ecology was conducted in Sections 7.6.</p> <p>Landscape and Visual – The most current and most relevant information available has been researched and analysed to produce and support all findings (Sections 8.7 and 8.8) and conclusion (Section 8.13) drawn in the landscape and visual impact assessment, as detailed in Section 8.</p> <p>Cultural Heritage – The most current and most relevant information available has been researched and analysed to produce and support all findings (Section 9.7) and conclusions (Section 9.10) drawn in the cultural heritage impact assessment, as detailed in Section 9.</p> <p>Air Quality – Air quality objectives, background and Air Sensitive Receivers (ASRs) information have been summarized in tables in Section 3 for easy reference. Drawing have been used to illustrate the locations of the ASRs.</p> <p>Noise – Relevant noise criteria and Noise Sensitive Receivers (NSRs) information are tabulated in tables in Section 4 for easy reference. Drawing have been used to illustrate locations of the NSRs.</p> <p>Water Quality – Water quality objectives, information based on past project references and proposed / committed methods and practices and findings have been summarized in tables in Section 5 for easy reference and comparison. Figures and appendices have been used to illustrate water sensitive receivers and the water quality impact assessment that would be easy for non-specialists readers to understand.</p> <p>Waste – Tables and figures are provided in Section 6 to present the information and analysis.</p> <p>Marine Ecology – Baseline information, concurrent project information, findings and analysis are presented in tables in Section 7, while drawings have been used to illustrate the survey locations and the habitat for easy understanding.</p> <p>Landscape &amp; Visual – The information and analysis presented within the report has been clearly and logically defined in a simple and straightforward approach. Information and analysis has been illustrated and tabulated with the documents (Tables 8.1 to 8.13) supporting drawings shown in figures</p> |



| TM Issues  | Compliance Check  |
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| <p>1.6 Are all the important data and results discussed in an integrated fashion within the information?</p> | <p>(Figures 8.1 to 8.13).</p> <p>Cultural Heritage – Tables, maps, photos and figures in Section 9 are provided to present the information and analysis.</p> <p>Air Quality – Important data including past monitoring data and future year background concentrations are summarised in the form of table in Sections 3.3.2 to 3.3.4, which are clearly referred to and discussed in the section.</p> <p>Noise – Relevant noise criteria is summarised in the form of table in Section 4.2, which are clearly referred to and discussed in the section.</p> <p>Water Quality – Discussion of the results is integrated with the presentation of the data results to enable a logical discussion in Section 5.</p> <p>Waste – The types and quantities of construction and operational wastes required to be disposed of are estimated and the disposal methods are summarised in Section 6.4 for construction phase (Sections 6.4.2 to 6.4.32) and operation phase (Sections 6.4.33 to 6.4.38).</p> <p>Marine Ecology – All important data and findings are discussed clearly and logically within the report with the use of drawings, tables and clearly articulated text in Section 7.</p> <p>Landscape &amp; Visual – All important data and findings are discussed clearly and logically within the report with the use of drawings, tables and clearly articulated text in Section 8.</p> <p>Cultural Heritage – All the important data and results have been discussed in an integrated fashion within the information in Section 9.</p> |
| <p>1.7 Has superfluous information (i.e. information not needed for the decision) been avoided?</p>          | <p>Air Quality – Superfluous information has been avoided and is not included in the air quality impact assessment in Section 3.</p> <p>Noise – Superfluous information has been avoided in Section 4.</p> <p>Water Quality – Unnecessary information has been avoided in Section 5.</p> <p>Waste – Information not needed for the decision has not been discussed in Section 6.</p> <p>Marine Ecology – Unnecessary information has been</p>   |

| TM Issues   | Compliance Check  |
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| <p>1.8 Has the information been presented in a concise form with a consistent terminology and are there logical links between different sections?</p> | <p>avoided in Section 7.</p> <p>Landscape and Visual – The Landscape and Visual Impact assessment in Section 8 does not include any unnecessary information.</p> <p>Cultural Heritage – Superfluous information has been avoided in Section 9.</p> <p>Air Quality – The information been presented in a concise form with consistent terminology and logical links among different sections.</p> <p>Noise – Information has been presented in a concise form and uses the same terminology throughout the section.</p> <p>Water Quality – The structure of the section follows the standard structure of the EIA report and uses the same terminology. The section is presented in a logical order and where applicable, relevant links are provided to refer between sections.</p> <p>Waste – Information has been presented in a concise form and uses the same terminology throughout the section.</p> <p>Marine Ecology – The report has been rationally formatted in order to present a concise and reasoned assessment. Consistent terminology is use throughout the section and references to other sections of the report have been provided.</p> <p>Landscape and Visual – The report has been rationally formatted in order to present a concise and reasoned assessment. Consistent terminology is use throughout the section and references to other sections of the report have been provided.</p> <p>Cultural Heritage – The information has been presented in a concise form with a consistent terminology and logical links are between different sections.</p> |
| <p>1.9 Have prominence and emphasis been given to severe adverse impacts, to substantial environmental benefits, and to controversial issues?</p>     | <p>Air Quality – No severe adverse impact is anticipated during both construction and operation phases. Initiatives to reduce air pollutant emissions from construction activities, which can help alleviate the air quality impacts, have been appropriately discussed in Section 3.7.1.</p> <p>Noise – With implementation of good site practices recommended in Section 4.5.2, no adverse impacts, substantial environmental dis-benefits, and controversial issues for noise impacts are anticipated.</p>   |

| TM Issues                                 | Compliance Check   |
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| <p>1.10 Is the information objective?</p> | <p>Water Quality – Analysis of the results has given prominence to water sensitive receivers. Mitigation measures to avoid the potential disturbance impact have been proposed in Section 5.9.</p> <p>Waste – No adverse impact is anticipated.</p> <p>Marine Ecology – No severe adverse impact is anticipated during both construction and operation phases. Mitigation measures to minimise marine ecological impacts, have been appropriately discussed in Section 7.8. The potential controversial issues would be about the potential impact to corals and CWDs, which has been fully addressed in the marine ecological impact assessment in Section 7.6.</p> <p>Landscape and Visual – Severe adverse impacts on the landscape and visually sensitive receivers have been discussed thoroughly in Sections 8.7, 8.8, 8.10 and 8.11.</p> <p>Cultural Heritage – Prominence and emphasis have been given to the identified adverse impacts, to substantial environmental benefits, and to controversial issues.</p> <p>Air Quality – The information as presented, including the past monitoring data and future year background concentrations, is objective.</p> <p>Noise – Information is based on site observations, best available information and is objective.</p> <p>Water Quality – Information is based on best available data and site observations and is objective.</p> <p>Waste – The information as presented, including the estimated waste quantities and sediment testing results, is objective.</p> <p>Marine Ecology – Information is based on updated field surveys conducted for the project and is objective.</p> <p>Landscape and Visual – Information provided in the assessment is quantified (where possible), qualitative, and factual. The assessment findings have been carefully considered with conclusions reflecting an objective assessment.</p> <p>Cultural Heritage – Information is based on findings of previous surveys, literature review and is objective.</p> |
| <p>Public Concerns</p>                    |  |

| TM Issues   | Compliance Check   |
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| <p>1.11 Does the information identify and address the main concerns of the general public and special interest groups (clubs, societies etc.) who may be affected by the project?</p> | <p>Air Quality – Representative air sensitive receivers within the assessment areas have been taken into consideration. Impacts on the sensitive receivers have been addressed.</p> <p>Noise – Potential noise impacts from construction and operation noise on the identified NSRs have been addressed.</p> <p>Water Quality – The information identifies and addresses the main concerns of the general public who may be affected by the project.</p> <p>Waste – The information identifies and addresses the main concerns of the general public who may be affected by the project.</p> <p>Marine Ecology – General public concerns on the impact from the construction and operation of the Project to ecological resources in the vicinity and it has been addressed in the marine ecological impact assessment.</p> <p>Landscape and Visual – The assessment addresses the main concerns of the general public affected by the project. The general public are included as visually sensitive receivers and their level of impact has been assessed accordingly.</p> <p>Cultural Heritage – The information identifies and addresses the main concerns of the general public who may be affected by the project.</p> |
| <p>1.12 Does the information take account of the main concerns of the relevant statutory or advisory bodies?</p>  | <p>Air Quality – The methodology of the assessment followed the EIAO-TM and the EIA Study Brief requirements and the identified air sensitive receivers has been agreed by DEP.</p> <p>Noise – The noise impact assessment have strictly followed the EIA Study Brief requirement and EIAO-TM. The assessment area has been agreed by the DEP.</p> <p>Water Quality – The methodology paper for water quality impact assessment has been submitted to DEP for endorsement. The assessment has also taken into account the main concerns of the relevant statutory and advisory bodies.</p> <p>Waste – The methodology of the assessment followed the EIAO-TM and the EIA Study Brief requirements and the Sediment Sampling and Testing Plan (SSTP) has been agreed by DEP.</p> <p>Marine Ecology – The main concerns of the statutory</p>   |

| TM Issues  | Compliance Check  |
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|  | <p>and advisory bodies have been accounted for in the assessment.</p> <p>Landscape and Visual – The relevant statutory and advisory bodies have provided comment on the LVIA section, such comments were taken into account when revising the text. The assessment addresses the main concerns of the relevant statutory and advisory bodies.</p> <p>Cultural Heritage – The information has taken account of the main concerns of the relevant statutory and advisory bodies.</p>  |
| <p>2. <u>Description of the Project</u></p> <p>Features of the Project</p> <p>2.1 Are the purpose(s) and objectives of the project explained?</p> <p>2.2 Are the nature and status of project decision(s), for which the EIA study is undertaken, clearly indicated?</p> <p>2.3 Is the estimated duration of the construction phase, operational phase and, where appropriate, decommissioning phase given, together with the programme within these phases?</p> <p>2.4 Is the design and size of the project described, using diagrams, plans and/or maps as necessary?</p> <p>2.5 Are the methods of construction described?</p> <p>2.6 Are the nature and methods of production or other types of activity involved in operation of the project described?</p> <p>2.7 Has the land taken up by the project site(s), construction sites, and any associated access arrangements, auxiliary facilities and landscaping areas, been clearly shown on a scaled map?</p> <p>2.8 For a linear project, has the land corridor, vertical and horizontal alignment and need for tunnelling, and earthworks been described?</p> <p>2.9 Have the uses to which the project will be put been described and the different land use areas demarcated?</p> | <p>The purpose and objectives of the project have been explained in Section 2.3.</p> <p>The main components of the project for which the EIA study is undertaken has been described in Section 1.1.</p> <p>The estimated duration and programme for the project is presented in Section 2.10.</p> <p>The design and size of the project is presented in Sections 1.1.1 to 1.1.3, and 2.2. Figure 1.1 illustrates the layout of the Project.</p> <p>Construction methods are described in Section 2.9. Section 2.9.3 describes the preferred construction method. Section 2.9.5 describes the construction sequence.</p> <p>The project boundary and main components are clearly shown in Figure 1.1.</p> <p>The project boundary and main components are clearly shown in Figure 1.1.</p> <p>The areas to be occupied and alignments of the project are described in Sections 2.6, 2.7 and 2.9.</p> <p>The uses of the project are described in Sections 1.1.1 to 1.1.3, and 2.3.</p> |
| Residues and Emissions   |   |

| TM Issues  | Compliance Check   |
|--|--|
| <p>2.10 Have the types and quantities of waste matter, energy (noise, vibration, light, heat, radiation etc.) and residual materials generated during construction and operation of the project, and the rate at which these will be produced, been estimated?</p> <p>2.11 Have the ways in which it is proposed to handle and/or treat these wastes and residual materials prior to release/disposal been indicated, together with the routes by which they will eventually be disposed of to the environment?</p> <p>2.12 Have any special or hazardous wastes which will be produced been identified as such and the methods for their disposal been described, as regards their likely main environmental impacts?</p> <p>2.13 Have the means by which the quantities of residuals and wastes were estimated been indicated and has uncertainty been acknowledged and ranges provided where appropriate?</p> | <p>Water Quality – Types and quantities of wastewater from various construction activities have been estimated and evaluated. Change in hydrodynamic regime, runoff from road surfaces and sewage effluent from proposed toilets during operation phase have also been estimated and assessed.</p> <p>Waste – Quantity, quality and timing of waste generation from construction and operational phases are summarised.</p> <p>All other technical sections – Not applicable.</p> <p>Water Quality – The proposed handling / treatment methods of the wastewater generated during construction and operation phases have been identified as part of the assessment.</p> <p>Waste – Transportation routings for various construction and types of wastes are described in Sections 6.4.31 to 6.4.32.</p> <p>All other technical sections – Not applicable.</p> <p>Waste – Chemical waste to be generated from construction and operation phases and disposal method are discussed in Sections 6.4.10 to 6.4.12, and 6.4.34 to 6.4.35.</p> <p>All other technical sections – Not applicable.</p> <p>Waste – The quantities of different types of wastes are estimated and uncertainties identified in Section 6.4.</p> |
| <p>3. <u>Background and History of the Project</u></p> <p>3.1 Where appropriate does the information include reference to the consideration of the project's siting or alignment by the project proponent?</p> <p>3.2 Are the reasons for selecting the proposed project or its siting and alignment, and the part environmental factors played in the selection, adequately described?</p> <p>3.3 Have the main environmental impacts of different siting or alignment options been compared clearly and objectively with those of the proposed project and with the likely future environmental conditions in the absence of the project?</p>  | <p>Consideration of alternatives for project elements and construction methodologies are presented in Sections 2.6 and 2.9 respectively.</p> <p>The reasons for the option selected are presented in Section 2.7.</p> <p>The main environmental impacts of alternatives and the likely future environmental conditions in the absence of the project have been clearly compared in Table 2.3.</p>  |
| <p>4. <u>Description of the Environment</u></p> <p>Description of the Area Occupied by and Surrounding the Project</p>   |  |

| TM Issues   | Compliance Check  |
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| <p>4.1 Have the areas expected to be significantly affected by the various aspects of the project been indicated with the aid of suitable maps?</p> | <p>Air Quality – Locations of identified air sensitive receivers within the assessment area are shown in Figure 3.1.</p> <p>Noise – Locations of identified noise sensitive receivers within the assessment area are shown in Figure 4.1.</p> <p>Water Quality – The potentially affected water sensitive receivers are shown in Figure 5.1.</p> <p>Waste – The sediment sampling locations are shown in Figure 6.1.</p> <p>Marine Ecology – The marine survey locations and habitat map are shown in Figures 7.1 and 7.2 respectively.</p> <p>Landscape and Visual – The areas to be affected by the project have been clearly illustrated at appropriate scales in Figures 8.2, 8.3 and 8.5.</p> <p>Cultural heritage – Figures in Section 9 have been used where appropriate.</p>  |
| <p>4.2 Have the land uses on the site(s) and in the surrounding areas been described?</p>   | <p>Air Quality – Existing land uses on the sites and in the surrounding areas have been described in Section 3.4.3 to 3.4.4 as well as summarised in Table 3.4.</p> <p>Noise – Existing land uses on the site and in the surrounding areas been described in Section 4.4.3 and summarised in Table 4.4.</p> <p>Water Quality – The water sensitive receivers and baseline conditions were described in Sections 5.3 and 5.4 respectively.</p> <p>Waste – The each type of waste to be generated on-site due to the future land use is identified in Section 6.4.</p> <p>Marine Ecology – The description of the environment and evaluation of baseline conditions were presented in Sections 7.4 and 7.5 respectively.</p> <p>Landscape and Visual – The landscape characters with regards to the existing land uses around and within the site have been described in Section 8.6 and clearly illustrated at an appropriate scale in Figure 8.3.</p> <p>Cultural Heritage – discussion on baseline conditions in the surrounding areas are given in Section 9.4.</p> |
| <p>4.3 Has the affected environment been defined broadly</p>  | <p>Air Quality – According to the EIA Study Brief, the</p>  |

| TM Issues  | Compliance Check   |
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| <p>enough to include any potentially significant effects occurring away from the immediate areas of construction and operation?</p>  | <p>construction and operational phase air quality impacts are assessed within the 500 m assessment area from the project boundary. Such assessment area is adequate to cover potentially significant effects occurring away from the immediate areas of construction and operation. The assessment area is described in Section 3.4.2 and illustrated in Figure 3.1.</p> <p>Noise – The construction and operational phase noise impacts are assessed within the 300 m assessment area from the project boundary as agreed by DEP. The assessment area is described in Section 4.4.2 and illustrated in Figure 4.1</p> <p>Water Quality – The study area of the water quality impact assessment follows the requirements of the EIA Study Brief which defines the study area to cover the North Western Water Control Zone.</p> <p>Waste – The affected environment been defined broadly enough to include any potentially significant effects occurring away from the immediate areas of construction and operation.</p> <p>Marine Ecology – According to Section 7.3.2 of the EIA Report, as no open sea dredging will be involved and the installation of steel pile casing would create a confined environment for excavation, a 500 m Assessment Area from the Project Area is defined for the purpose of the marine ecological impact assessment. Potential impacts on sites of conservation importance in the vicinity of Assessment Area, and ecological impact of marine traffic arising from the works within and outside of the Assessment Area were also assessed.</p> <p>Landscape and Visual – The limit of the landscape impact study is 500 m beyond the boundary of the works (as stated in the EIA Study Brief) as shown in Figures 8.2 and 8.3. The limit of the visual impact study is the visual envelope of the Project, as shown in Figure 8.5.</p> <p>Cultural Heritage – The affected environment been defined broadly enough to include any potentially significant effects occurring away from the immediate areas of construction and operation.</p> |
| <p>Baseline Conditions</p> <p>4.4 Have the components of the environment potentially affected by the project been identified and described sufficiently for the prediction of impacts?</p> | <p>Air Quality – Baseline concentrations of relevant air pollutants near the Project area in past five years and future year background concentration have been reviewed in Sections 3.3.2 and 3.3.4.</p>  |



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| <p>4.5 Were the methods used to investigate the affected environment appropriate to the size and complexity of the assessment task?</p> | <p>Noise – Discussion on existing noise climate is presented in Section 4.3.2.</p> <p>Water Quality – Baseline conditions were summarised in Section 5.4.</p> <p>Waste – The components of the environment potentially affected by the Project have been identified and described sufficiently for the prediction of impacts.</p> <p>Marine Ecology – Discussion on the existing environment and evaluation of baseline conditions are presented in Sections 7.4 to 7.5.</p> <p>Landscape and Visual – Landscape Resources (LRs) and Landscape Character Areas (LCAs) have been identified, quantified (where possible), and described in detail in Sections 8.6.1 and 8.6.2 respectively. Visually Sensitive Receivers (VSRs) have been identified and described in Sections 8.6.7 to 8.6.9.</p> <p>Cultural Heritage – Discussion on baseline conditions were given in Section 9.4.</p> <p>Air Quality – the methods adopted follow the EIA Study Brief requirements, and Section 1 of Annex 4 and Annex 12 of the EIAO-TM, and are appropriate for the project.</p> <p>Noise – The methods used to investigate noise impact follow the requirements of EIA Study Brief, and Annexes 5 and 13 of the EIAO-TM.</p> <p>Water Quality – The methods used to investigate water quality impacts are appropriate to the size and complexity of the assessment task, and have been developed in accordance to the requirements in EIA Study Brief, and Annexes 6 and 14 of the EIAO-TM.</p> <p>Waste – The assessment methodology of the waste management issues associated with construction and operation phases is described in Section 6.4, and follows the requirements of EIA Study Brief, and Annexes 7 and 15 of the EIAO-TM.</p> <p>Marine Ecology – the methods adopted follow the EIA Study Brief requirements, and Annexes 8 and 16 of the EIAO-TM, and are appropriate for the Project.</p> <p>Landscape and Visual – Sections 8.3 to 8.8 present assessment of the potential landscape and visual impacts in accordance with Annexes 10 and 18 of the EIAO-TM and the requirements of the EIA Study Brief. The methods used to investigate the affected landscape and visual environment were appropriate</p> |

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| <p>4.6 Has a prediction of the likely future environmental conditions in the absence of the project been developed?</p> <p>4.7 Have existing technical data sources, including local records and studies carried out for environmental agencies and/or interest groups been searched?</p> <p>4.8 Have local, regional and national plans and policies been reviewed and other data collected as necessary to predict future environmental conditions?</p> | <p>to the size and complexity of the project. The methods included site visits and desk-top studies of topographical maps, information databases, approved EIAs of the committed projects and aerial photographs. Reference is also made to the 'Landscape Value Mapping of Hong Kong' study. This is described in Sections 8.2 to 8.4.</p> <p>Cultural Heritage – The methods used to investigate the affected environment are appropriate to the size and complexity of the assessments, and follow the EIA Study Brief requirements, and Annexes 10 and 19 of the EIAO-TM.</p> <p>Water Quality – The future environmental conditions in the absence of the project have been developed to evaluate the change in hydrodynamic regime.</p> <p>All other technical sections – Not applicable.</p> <p>Air Quality – Historical air pollutant data from relevant EPD's air quality monitoring station and future year background concentrations have been reviewed in Sections 3.3.2 and 3.3.4 for reference.</p> <p>Noise – Desktop research has been conducted in preparation of Section 4.</p> <p>Water Quality – Existing data sources have been reviewed as part of baseline conditions presented in Section 5.4.</p> <p>Waste – The existing technical data sources have been searched.</p> <p>Marine Ecology – Reference has been made to various existing data sources and studies listed in Table 7.1 throughout the Sections 7.4 and 7.5.</p> <p>Landscape and Visual – Existing technical data sources, including local records and studies have been researched and considered in the landscape and visual impact assessment and described in Sections 8.5 and 8.6.</p> <p>Cultural Heritage – Reference has been made to various approved EIA reports and data sources for assessment, as presented in Section 9.4.</p> <p>Air Quality – Local, regional and national plans and policies have been reviewed in Section 3.2 and past monitoring data and future background concentrations have been collected as tabulated in Tables 3.2 and 3.3.</p> <p>Noise – The local, regional and national plans and</p> |

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| <p>4.9 Have relevant departments and agencies holding information on baseline environmental conditions been approached?</p> | <p>policies have been reviewed and mentioned in Section 4.2.</p> <p>Water Quality – The local, regional and national plans and policies have been reviewed and mentioned in Section 5.2.</p> <p>Waste – The local, regional and national plans and policies have been reviewed and mentioned in Section 6.2.</p> <p>Marine Ecology – The local, regional and national plans and policies have been reviewed and mentioned in Section 7.2.1.</p> <p>Landscape and Visual – The local, regional and national plans and policies have been reviewed to predict the future environmental conditions, as mentioned in Sections 8.2 and 8.5.</p> <p>Cultural Heritage – The local, regional and national plans and policies have been reviewed and mentioned in Section 9.2.</p> <p>Air Quality – Information from EPD's monitoring stations are publically available and have been obtained for determining baseline conditions as presented in Section 3.3.</p> <p>Noise – Not Applicable</p> <p>Water Quality – information from EPD's monitoring stations are publically available and have been obtained for determining baseline conditions as presented in Section 5.4. Relevant departments and agencies have also been approached to obtain information on concurrent projects for adoption in the cumulative impact assessment as presented in Section 5.8.</p> <p>Waste – Not Applicable</p> <p>Marine Ecology – Monitoring data and findings of surveys from relevant department and agencies were referenced in the discussion and evaluation of existing environment and baseline conditions.</p> <p>Landscape and Visual – Relevant departments and agencies have been approached to receive applicable information regarding the baseline conditions and concurrent projects for the landscape and visual impact assessment outlined in Sections 8.6 and 8.11.1.</p> <p>Cultural Heritage – Study reports and publications from relevant department and agencies were</p> |

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|   | referenced in the evaluation of baseline conditions and archaeological potential as presented in Section 9.4.  |
| <p>5. <u>Description of Impacts</u></p> <p>5.1 Have the direct and indirect/secondary effects of constructing, operating and, where relevant, after use or decommissioning of the project been considered (including both positive and negative effects)?</p> <p>5.2 Does the information include consideration of whether effects will arise as a result of "consequential" development i.e. whether additional development, which it would be difficult to resist, will be included in the area, leading to further environmental effects? For a project with multiple stages, are the impacts caused by overlapping of different stages considered and determined?</p> | <p>Air Quality – Both the direct and indirect/secondary effects of constructing and operating the project have been considered in Section 3.5.</p> <p>Noise – Direct and indirect/secondary noise impact of the project have been considered in Section 4.5.</p> <p>Water Quality – The impacts arisen from construction and operation phase have been identified in Section 5.5</p> <p>Waste – The impacts of waste generation from construction and operation phase are discussed in Section 6.4.</p> <p>Marine Ecology – Both the direct and indirect/secondary impacts aroused from construction and operation phases have been identified in Section 7.6.</p> <p>Landscape and Visual – The direct and indirect/secondary impacts of the construction and operating phases of the project have been considered in the assessment in Sections 8.7 and 8.8.</p> <p>Cultural Heritage – Both the direct and indirect/secondary effects of constructing and operating the project have been considered in Section 9.7.</p> <p>Air Quality – Air quality impacts during the entire construction period have been assessed. During operational phase, no air quality impact is anticipated.</p> <p>Noise – Consequential developments as a result of the project have been considered.</p> <p>Water Quality – Consequential development as a result of the project have already been incorporated as part of the assessment. Water quality assessments are based on completed scenario for operation phase.</p> <p>Waste – Relevant construction activities and construction programme have been carefully planned and developed.</p> <p>Marine Ecology – Consequential development as a result of the project have already been incorporated</p> |

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| <p>5.3 Have the above types of impacts been investigated in so far as they affect the following:</p> <ul style="list-style-type: none"> <li>- air and climate;</li> <li>- water and soils;</li> <li>- noise;</li> <li>- landscape;</li> <li>- ecology;</li> <li>- historic and cultural heritage;</li> <li>- land use;</li> <li>- impacts on people and communities;</li> <li>- impacts on agriculture and fisheries activities.</li> </ul> | <p>as part of the assessment.</p> <p>Landscape and Visual – Consequential developments as a result of the project have been considered.</p> <p>Cultural Heritage – Consequential developments as a result of the project have been considered.</p> <p>Air Quality – Air quality impacts due to the Project have been assessed in Sections 3.5 and 3.6.</p> <p>Noise – Noise impacts have been investigated in Section 4.5.</p> <p>Water Quality - Impacts to water quality have been investigated and addressed in Section 5.7.</p> <p>Waste – Impact assessment of the waste generation has been carried out and discussed in Section 6.4.</p> <p>Marine Ecology – Marine ecological impact due to the Project has been assessed in Section 7.6.</p> <p>Landscape and Visual – The impacts on the landscape and visual have been investigated in Sections 8.7 and 8.8.</p> <p>Cultural Heritage – The impacts on the cultural heritage have been investigated in Section 9.7.</p> |
| <p>5.4 If any of the above are not of concern in relation to the specific project and its location, is this clearly stated in the information?</p>  | <p>All of the above are of potential concern in relation to the project and have been evaluated accordingly.</p>   |
| <p>5.5 Is the investigation of each type of impact appropriate to its importance for the decision, avoiding unnecessary information and concentrating on the key issues?</p>  | <p>Air Quality – Section 3 has been prepared to focus on the key air quality issues and to avoid unnecessary information.</p> <p>Noise – Section 4 has investigated the impact to its importance for the decision and concentrating on the key issues.</p> <p>Water Quality – The level of investigation of each type of water impact has taken into account the significance of that impact, hence some impacts are quantitatively assessed while others are qualitatively assessed. Assessments focus on the key compliance requirement and unnecessary information / results have been avoided.</p> <p>Waste – The investigation of each type of impact is appropriate to its importance for the decision, avoiding unnecessary information and concentrating on key issues.</p>  |

| TM Issues  | Compliance Check   |
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| <p>5.6 Are impacts which may not be themselves significant, but which may contribute incrementally to a significant effect considered?</p> <p>5.7 Does the information include a description of the methods/approaches used to identify impacts and the rationale for using them?</p> <p>5.8 If the nature of the project is such that accidents are possible which might cause severe damage within the surrounding environment, has an assessment of the probability and likely consequences of such events been carried out and the main findings reported?</p> | <p>Marine Ecology – The impact to its importance for the decision and concentrating on the key issues has been investigated in Section 7.6.</p> <p>Landscape and Visual – The investigation for each impact is appropriate outlined in Sections 8.7, 8.8 and 8.11.</p> <p>Cultural Heritage – Section 9 has investigated the impact to its importance for the decision and concentrating on the key issues.</p> <p>Landscape &amp; Visual – All landscape and visual impacts have been considered and reflected in the findings of the assessment.</p> <p>Air Quality – The approaches used to identify and assess air quality impacts during construction phase are described in Sections 3.5.1 to 3.5.4.</p> <p>Noise – The approach used to address the noise impact follow the requirements of EIA Study Brief, and Annexes 5 and 13 of the EIAO-TM, and described in Section 4.5.1.</p> <p>Water Quality – The methods / approaches used to assess impacts are described in Section 5.6.</p> <p>Waste – The assessment methodology of the waste management issues associated with construction and operation phases is described in Section 6.4.1.</p> <p>Marine Ecology – The methodology for marine ecological impact assessment follows EIA Study Brief requirements and guideline as stipulated in EIAO-TM Annexes 8 and 16, and is described in Section 7.3.</p> <p>Landscape and Visual – The methodologies for landscape assessment and visual impact assessment are described in Sections 8.3 and 8.4 respectively.</p> <p>Cultural Heritage – The methodology follows EIA Study Brief requirements and guideline as stipulated in EIAO-TM Annexes 10 and 19, and is described in Section 9.3.</p> <p>Water Quality – The potential impact associated with accidental spillage of chemicals which may be used during construction activities is discussed in Section 5.7.13, while relevant mitigation measures and good site practices are recommended in Sections 5.9.18 to 5.9.20.</p> <p>Waste – Assessment has been carried out and discussed in Section 6.4.11.</p> |

| TM Issues  | Compliance Check  |
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|  | All other technical sections – Not applicable.  |
| <p data-bbox="264 322 491 349">Magnitude of Impacts</p> <p data-bbox="209 383 842 506">5.9 Are impacts described in terms of the nature and magnitude of the change occurring and the nature (location, number, value, sensitivity) of the affected receiver?</p> <p data-bbox="209 1357 842 1480">5.10 Has the timescale over which the effects will occur been predicted such that it is clear whether impacts are short, medium or long term, temporary or permanent, reversible or irreversible?</p> | <p data-bbox="871 383 1398 506">Air Quality – The air quality impact from the construction phase of the Project has been addressed at the sensitive receivers identified in Section 3.6.</p> <p data-bbox="871 539 1398 663">Noise – The noise impact from the construction phase and operation phase of the Project has been addressed at the sensitive receivers identified in Section 4.5.</p> <p data-bbox="871 696 1398 797">Water Quality – The change in hydrodynamic regime during operation phase have been quantified and addressed in Sections 5.7.14 to 5.7.17.</p> <p data-bbox="871 831 1398 931">Waste – Quantity, quality and timing of waste generation from construction and operation phases of the Project are summarised in Section 6.4.</p> <p data-bbox="871 965 1398 1021">Marine Ecology – Marine ecological impact were identified and provided in Section 7.6.</p> <p data-bbox="871 1055 1398 1245">Landscape and Visual – Impacts are described in terms of nature and magnitude of change in conformance to the methodology described in Section 8.3 and 8.4. The landscape and visual impact assessment describes these in Sections 8.6 to 8.8.</p> <p data-bbox="871 1279 1398 1335">Cultural Heritage – Potential impact on cultural heritage were identified and provided in Section 9.7.</p> <p data-bbox="871 1368 1398 1424">Air Quality – The impact will occur during construction only.</p> <p data-bbox="871 1458 1398 1514">Noise – No noise impact anticipated during construction and operation phases.</p> <p data-bbox="871 1547 1398 1603">Water Quality – The impact will occur during construction and operation phases.</p> <p data-bbox="871 1637 1398 1693">Waste – The impact will occur during the waste generation during construction and operation phases.</p> <p data-bbox="871 1727 1398 1805">Marine Ecology – The impact will occur during construction and operation phases.</p> <p data-bbox="871 1839 1398 1917">Landscape &amp; Visual – The timescale over which the effects will occur has been described in Sections 8.7 and 8.8.</p> <p data-bbox="871 1951 1398 1980">Cultural Heritage – No cultural heritage impact</p> |

| TM Issues  | Compliance Check   |
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| <p>5.11 Where possible, have predictions of impacts been expressed in quantitative terms? Otherwise, have qualitative descriptions been defined?</p>   | <p>anticipated during construction and operation phases.</p> <p>Air Quality – Qualitative assessment has been adopted.</p> <p>Noise – Qualitative assessment has been adopted in accordance to the EIA Study Brief.</p> <p>Water Quality – Both quantitative and qualitative assessments have been adopted.</p> <p>Waste – The quantities of waste to be generated in construction and operation phases are identified in Section 6.4.</p> <p>Marine Ecology – Loss of marine habitats and the respective numbers of coral colonies under direct and indirect ecological impacts have been quantified in Sections 7.6.5, 7.6.7, 7.6.14, 7.6.16 and 7.6.17. Qualitative assessment of ecological impacts on sites of conservation importance and marine wildlife other than corals has been adopted in the same section.</p> <p>Landscape and Visual – The methodology for the predictions is in accordance with the EIAO, the EIAO-TM and the requirements of the EIA Study Brief. Qualitative descriptions of impacts have been described in the landscape and visual assessments in Sections 8.7 and 8.8.</p> <p>Cultural Heritage – Qualitative assessment has been adopted based on desktop review and described in Section 9.7.</p> |
| <p>5.12 Where quantitative predictions have been provided, is the level of uncertainty attached to the results described?</p>  | <p>Water Quality – Worst case scenario has been adopted in water quality impact assessment.</p> <p>Waste – Estimates of waste quantities due to the project are based on engineers' practical estimation, which are the best available information at the time.</p> <p>All other technical sections – Not applicable.</p>  |
| <p>Data and Methods</p> <p>5.13 Have the methods used to predict the nature, size and scale of impacts been described and are they appropriate to the importance of each projected impact?</p> | <p>Air Quality – The methods used to predict the nature, size and scale of air quality impacts are developed according to the EIA Study Brief requirements.</p> <p>Noise – The methods used to address the noise impact follow the EIA Study Brief requirements.</p> <p>Water Quality – The methods adopted to predict the water quality impacts are described in Section 5.6 and follows the EIA Study Brief requirements.</p>  |



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| <p>5.14 Are the data used to estimate the size and scale of the main impacts sufficient for the task, are they clearly described and have their sources been clearly identified?</p>  | <p>Waste – The assessment methodology of the waste management issues associated with construction and operation phases follows the EIA Study Brief requirements.</p> <p>Marine Ecology – The assessment methodology follows the EIA Study Brief requirements and the Annex 8 of the EIAO-TM and is presented in Section 7.3.</p> <p>Landscape and Visual – The methodology for the predictions is in accordance with the EIAO, the EIAO-TM and the EIA Study Brief requirements. The methodologies for the landscape and visual impact assessment in Sections 8.3 and 8.4, respectively, reflects in qualitative terms, the nature, size and scale of the impacts.</p> <p>Cultural Heritage – The assessment methodology follows the EIA Study Brief requirements and presented in Section 9.3.</p> <p>Air Quality – Not Applicable.</p> <p>Noise – Not Applicable.</p> <p>Water Quality – Data used for the water quality assessment has been appropriately sourced and references to other studies have been quoted where applicable.</p> <p>Waste – The data used to estimate the size and scale of the main impacts are sufficient for the task, they are clearly described and their sources have been clearly identified in the section.</p> <p>Marine Ecology – The data adopted are considered sufficient and they are clearly described with sources clearly identified as described in Section 7.6.</p> <p>Landscape and Visual – Not Applicable.</p> <p>Cultural Heritage – The data adopted are considered sufficient and they are clearly described with sources clearly identified.</p> |
| <p>6. <u>Mitigation</u></p> <p>Description of Mitigating Measures</p> <p>6.1 Has the mitigation of significant negative impacts been considered and, where feasible, have specific measures been proposed to address each impact?</p> | <p>Air Quality – Mitigation measures during construction phase have been recommended, as detailed in Section 3.7.1. Mitigation measure is not required during operational phase.</p> <p>Noise – Good site practices have been considered</p>  |

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| <p>6.2 Have the reasons for choosing the particular type of mitigation, and the other options available, been described?</p>     | <p>and proposed to minimise noise impact to the surroundings, and are discussed in Sections 4.5.2.</p> <p>Water Quality – Specific mitigation measures have been recommended to address relevant impacts and are listed in Section 5.9.</p> <p>Waste – Mitigation measures for both construction and operation phases for each type of waste to be generated are identified in Section 6.5.</p> <p>Marine Ecology – Mitigation measures have been proposed to address relevant impacts are listed in Section 7.8.</p> <p>Landscape and Visual – Mitigation measures for adverse impacts has been proposed and included in the report. Mitigation measures for both landscape and visual impacts are described in Section 8.9.</p> <p>Cultural Heritage – No mitigation measure is required.</p> <p>Air Quality – Proposed mitigation measures are standard measures that have been proposed in past EIAs and are well established and accepted.</p> <p>Noise – The recommended good site practices are well established and accepted.</p> <p>Water Quality – The mitigation measures proposed are generally standard measures that are well established and accepted.</p> <p>Waste – The reasons for choosing mitigation measures for each type of waste to be generated from the project are identified under Section 6.5.</p> <p>Marine Ecology – The proposed mitigation measures have been thoroughly considered and detailed in Section 7.8.</p> <p>Landscape and Visual – The reasons for choosing mitigation measures are described in Section 8.9.</p> <p>Cultural Heritage – Not applicable.</p> |
| <p>6.3 Where mitigating measures are proposed, has the significance of any impact remaining after mitigation been described?</p> | <p>Air Quality – The significance of any impact after mitigation are described in Section 3.8.</p> <p>Noise – The significance of any impact after mitigation are described in Section 4.5.</p> <p>Water Quality – The residual water quality impact has been described in Section 5.10.</p>  |

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| <p>6.4 Where appropriate, do mitigation methods considered include modification of project design, construction and operation, the replacement of facilities/resources, and the creation of new resources, as well as "end-of-pipe" technologies for pollution control?</p> | <p>Waste – With the implementation of the recommended mitigation measures, the evaluation of adverse residual impact is described in Section 6.6.</p> <p>Marine Ecology – The anticipation for marine ecological residual impacts during both construction and operational phases are presented in Section 7.9.</p> <p>Landscape and Visual – The significance of residual impacts after the implementation of mitigation measures is described in Section 8.10.</p> <p>Cultural Heritage – Not applicable.</p> <p>Air Quality – Construction phase mitigation measures including good site management and dust control measures, have been recommended, as detailed in Section 3.7.1. No mitigation measure is required for operational phase.</p> <p>Noise – The proposed good site practices have been recommended and detailed in Section 4.5.2.</p> <p>Water Quality – Mitigation measures have included recommendations for design, construction and operation of the relevant project components / facilities where applicable, as detailed in Section 5.9.</p> <p>Waste – Not applicable.</p> <p>Marine Ecology – Mitigation measures have included recommendations for design, construction and operation of the relevant project components / facilities where applicable, as detailed in Section 7.8.</p> <p>Landscape and Visual – Mitigation measures, as described in Sections 8.9 involve the modification of project design, construction and operation. The mitigation measures are listed in Table 8.10.</p> <p>Cultural Heritage – Not applicable.</p> |
| <p>6.5 Is it clear to what extent the mitigation methods will be effective?</p>   | <p>Air Quality – The mitigated air quality impacts during construction phase have been addressed, as detailed in Section 3.7.2.</p> <p>Noise – Implementation of good site practices would minimise noise impact generated from the project as described in Section 4.5.2.</p> <p>Water Quality – The effectiveness of the proposed mitigation methods is subject to an EM&amp;A programme with adaptive management.</p> <p>Waste – The mitigation methods will be effective</p>  |

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| <p>6.6 Where the effectiveness is uncertain or depends on assumptions about operating procedures, climatic conditions, etc., or where there is a risk that mitigation will not work, is this made clear and has data been introduced to justify the acceptance of the assumptions?</p>  | <p>when waste is generated as described in Section 6.5.</p> <p>Marine Ecology – Same as water quality impact assessment, the effectiveness of the proposed mitigation methods is subject to an EM&amp;A programme with adaptive management.</p> <p>Landscape and Visual – Specific mitigation measures are identified for each individual Landscape Resource, Landscape Character Area and Visually Sensitive Receiver in Section 8.9 and are illustrated in Figures 8.12 and 8.13.</p> <p>Cultural Heritage – Not applicable.</p> <p>Air Quality – The recommended mitigation measures are detailed in Section 3.7.1 and all these measures are feasible and practicable.</p> <p>Noise – The proposed good site practices detailed in Section 4.5.2 are feasible and practicable.</p> <p>Water Quality – All the recommended mitigation measures as detailed in Section 5.9 are feasible and practicable.</p> <p>Waste – Not applicable.</p> <p>Marine Ecology – The recommended mitigation measures are feasible and practicable. Monitoring of the effectiveness of mitigation measures have been proposed in the EM&amp;A Manual.</p> <p>Landscape and Visual – Not applicable.</p> <p>Cultural Heritage – Not applicable.</p> |
| <p>Implementation of Mitigation Measures</p> <p>6.7 Have details of how the mitigation measures will be implemented and function over the time span for which they are necessary been presented? Does the report list out clearly what mitigation measures would be implemented, by whom, when, where and to what requirements? Is the responsibility for implementing the recommended mitigation measures clearly defined?</p> | <p>Implementation of mitigation measures including by whom, when, where and to what requirements are clearly listed out in Appendix 10.1 – Project Implementation Schedule.</p>  |
| <p>Environmental Effects of Mitigation</p> <p>6.8 Have any adverse environmental effects of mitigation measures been investigated and described?</p>  | <p>Air Quality – The recommended mitigation measures will not give rise to adverse environmental effect.</p> <p>Noise – No adverse environmental effect of recommended good site practices is anticipated.</p> <p>Water Quality – No adverse effect of the proposed</p>  |

| TM Issues  | Compliance Check  |
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| <p>6.9 Has the potential for conflict between the benefits of mitigating measures and their adverse impacts been considered?</p>                                     | <p>mitigation measures is anticipated.</p> <p>Waste – No adverse effects of the proposed mitigation measures are anticipated.</p> <p>Marine Ecology – No adverse effects of the proposed mitigation measures are anticipated.</p> <p>Landscape and Visual – There is no adverse environmental effect due to the landscape and visual mitigation measures.</p> <p>Cultural Heritage – Not applicable.</p> <p>Air Quality – The recommended mitigation measures will not give rise to adverse environmental effects, and hence no potential conflict issues.</p> <p>Noise – No adverse environmental effect of recommended good site practices is anticipated.</p> <p>Water Quality – No adverse effect of the proposed mitigation measures is anticipated.</p> <p>Waste – No adverse effects of the proposed mitigation measures are anticipated.</p> <p>Marine Ecology – No adverse effects of the proposed mitigation measures are anticipated.</p> <p>Landscape and Visual – There is no adverse environmental effect due to the landscape and visual mitigation measures.</p> <p>Cultural Heritage – Not applicable.</p> |
| <p>7. Evaluation of Residual Impacts</p> <p>7.1 Have the available standards, assumptions and criteria which can be used to evaluate the impacts been discussed?</p> | <p>Air Quality – Available standards and criteria used to evaluate air quality impacts are presented in Section 3.2.</p> <p>Noise – Noise standards and criteria are presented in Section 4.2.</p> <p>Water Quality – Available standards and criteria used to evaluate water quality impacts are presented in Section 5.2.</p> <p>Waste – The available standard and criteria are identified in Section 6.2.</p> <p>Marine Ecology – Legislations, standards and guidelines are presented in Section 7.2.</p> <p>Landscape and Visual – The landscape and visual</p>   |

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| <p>7.2 Have the predicted impacts been compared to the available standards and criteria?</p>   | <p>impact assessment has been determined in accordance with the EIAO and the requirements of the EIA Study Brief and other such legislation, standards and guidelines outlined in Section 8.2.</p> <p>Cultural Heritage – The available standard and criteria are identified in Section 9.2.</p> <p>Air Quality – No adverse residual air quality impact is anticipated, as presented in Section 3.8.</p> <p>Noise – The proposed good site practices themselves do not cause any residual impact.</p> <p>Water Quality – No unacceptable residual impact is anticipated during the construction phase and no adverse residual impact is anticipated during operation phase, as presented in Section 5.10.</p> <p>Waste – No adverse residual impact is anticipated.</p> <p>Marine Ecology – Evaluation of residual impact is presented in Section 7.9.</p> <p>Landscape and Visual – The predicted landscape and visual impacts have been compared to the available standards and criteria and described in Sections 8.7 and 8.8. Evaluation of residual impact is presented in Section 8.10.</p> <p>Cultural Heritage – No residual impact is anticipated.</p> |
| <p>7.3 Have the residual impacts, which are the net impacts with the mitigation measures in place, been described and evaluated against the available Government policies, standards and criteria?</p> | <p>Air Quality – No adverse residual air quality impact is anticipated, as discussed in Section 3.8.</p> <p>Noise – The proposed good site practices themselves do not cause any residual impact.</p> <p>Water Quality – Not applicable as no residual impact is identified in Section 5.10.</p> <p>Waste – No residual impact is anticipated.</p> <p>Marine Ecology – Evaluation of residual impact is presented in Section 7.9.</p> <p>Landscape and Visual – The residual impacts with and without mitigation measures have been described and evaluated against the available government policies, standards and criteria and described in Section 8.10.</p> <p>Cultural Heritage – No residual impact is anticipated.</p>   |
| <p>7.4 Have the residual impacts been discussed and evaluated in terms of the impact on the health and welfare of the local</p>  | <p>Air Quality – No adverse residual air quality impact is</p>   |

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| <p>community and on the protection of environmental resources?</p>   | <p>anticipated, as discussed in Section 3.8.</p> <p>Noise – The proposed good site practices themselves do not cause any residual impact.</p> <p>Water Quality – Not applicable as no residual impact is identified in Section 5.10.</p> <p>Waste – No residual impact is anticipated.</p> <p>Marine Ecology – Evaluation of residual impact is presented in Section 7.9.</p> <p>Landscape and Visual – The residual impacts with and without mitigation measures have been described and evaluated against the available government policies, standards and criteria and described in Section 8.10.</p> <p>Cultural Heritage – No residual impact is anticipated.</p>            |
| <p>7.5 Have the magnitude, location and duration of the residual impacts been discussed in conjunction with the value, sensitivity and rarity of the resource?</p>   | <p>Air Quality – No adverse residual air quality impact is anticipated, as discussed in Section 3.8.</p> <p>Noise – The proposed good site practices themselves do not cause any residual impact.</p> <p>Water Quality – Not applicable as no residual impact is identified in Section 5.10.</p> <p>Waste – No residual impact is anticipated.</p> <p>Marine Ecology – Evaluation of residual impact is presented in Section 7.9.</p> <p>Landscape and Visual – The sensitivity and rarity of the resources has been considered in the overall assessment of the residual impacts as described in Section 8.10.</p> <p>Cultural Heritage – No residual impact is anticipated.</p> |
| <p>7.6 Where there are no generally accepted standards or criteria for the evaluation of residual impacts, have alternative approaches been discussed and, if so, is a clear distinction made between fact, assumption and professional judgement?</p> | <p>Air Quality – No adverse residual air quality impact is anticipated, as discussed in Section 3.8.</p> <p>Noise – The proposed good site practices themselves do not cause any residual impact.</p> <p>Water Quality – Not applicable as no residual impact is identified in Section 5.10.</p> <p>Waste – No residual impact is anticipated.</p> <p>Marine Ecology – Evaluation of residual impact is presented in Section 7.9.</p>   |

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| <p>7.7 Have the residual impacts, if any, arising from the implementation of the proposed mitigation measures, been considered?</p>   | <p>Landscape and Visual – The residual impacts with and without mitigation measures have been described and evaluated against the available government policies, standards and criteria and described in Section 8.10.</p> <p>Cultural Heritage – No residual impact is anticipated.</p> <p>Air Quality – No adverse residual air quality impact is anticipated and hence evaluation of residual impact is not required.</p> <p>Noise – No residual construction noise impact is predicted.</p> <p>Water Quality – Not applicable as no residual impact is identified.</p> <p>Waste – No residual impact is anticipated.</p> <p>Marine Ecology – Evaluation of residual impact is presented in Section 7.9.</p> <p>Landscape and Visual – There are no adverse environmental effects due to the mitigation measures, therefore this is not applicable.</p> <p>Cultural Heritage – No residual impact is anticipated.</p> |
| <p>8. <u>Environmental Monitoring and Audit Proposals</u></p> <p>8.1 If impacts are uncertain, have monitoring arrangements been proposed to check the environmental impacts resulting from the implementation of the project and their conformity with the predictions made?</p> | <p>Air Quality – Environmental site audit is recommended in Section 3.9.1 to ensure the dust control measures are implemented effectively.</p> <p>Noise – EM&amp;A is not required as no adverse environmental impact is anticipated.</p> <p>Water Quality – Relevant EM&amp;A programme has been proposed in Section 5.11 and detailed in the EM&amp;A Manual to check the water quality during construction.</p> <p>Waste – A Waste Management Plan (WMP) should be prepared by the Contractor and submitted to the Project Manager / Project Manager's Representative during construction phase.</p> <p>Marine Ecology – Relevant EM&amp;A programme and post-translocation coral monitoring surveys has been proposed in Section 7.10 and detailed in the EM&amp;A Manual.</p> <p>Landscape and Visual – Relevant EM&amp;A programme and baseline review has been proposed in Section</p>                            |



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| <p>8.2 Does the scale of any proposed monitoring arrangements correspond to the potential scale and significance of deviations from expected impacts?</p> <p>8.3 Is the need for and the scope of the monitoring and audit requirements defined in the report?</p> <p>8.4 Does the report contain an Environmental Monitoring and Audit programme, as prescribed in Annex 21, if it is found to be needed?</p> | <p>8.12 and detailed in the EM&amp;A Manual.</p> <p>Cultural Heritage – EM&amp;A is not required.</p> <p>Air Quality – Not applicable.</p> <p>Noise – Not applicable.</p> <p>Water Quality – Relevant EM&amp;A programme has been proposed in Section 5.11 and detailed in the EM&amp;A Manual.</p> <p>Waste – Not applicable.</p> <p>Marine Ecology – Relevant EM&amp;A programme and post-translocation coral monitoring surveys has been proposed in Section 7.10 and detailed in the EM&amp;A Manual.</p> <p>Landscape and Visual – Deviations of predicted impacts is low therefore this is not applicable.</p> <p>Cultural Heritage – Not applicable.</p> <p>Air Quality – The need for and scope of environmental site audit is defined in Section 3.9 and detailed in EM&amp;A Manual.</p> <p>Noise – Not applicable.</p> <p>Water Quality – The need for monitoring have been defined in Section 5.11.1 and detailed in the EM&amp;A Manual.</p> <p>Waste – Not applicable.</p> <p>Marine Ecology – The need for monitoring and post-translocation coral monitoring surveys have been defined in Section 7.10 and detailed in the EM&amp;A Manual.</p> <p>Landscape and Visual – The need for and relevant scope is defined in Section 8.12 and detailed in the EM&amp;A Manual.</p> <p>Cultural Heritage – Not applicable.</p> <p>An environmental monitoring and audit programme is specified in the EM&amp;A Manual for this project.</p> |
| <p>9. <u>Difficulties Compiling the Information</u></p> <p>9.1 Have any gaps in the required data been indicated and the means used to deal with them in the assessment been</p>   | <p>Air Quality – Not applicable.</p>  |

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| <p>explained?</p> <p>9.2 Have any difficulties in assembling or analysing the data needed to predict impacts been acknowledged and explained?</p>  | <p>Noise – Not applicable.</p> <p>Water Quality – No significant gap in the data required for water quality impact assessment.</p> <p>Waste – Not applicable.</p> <p>Marine Ecology – No literature on site specific ecological information on coral colonies, intertidal and benthic habitats could be found during the course of study, therefore, respective ecological surveys were conducted to fill the information gap.</p> <p>Landscape and Visual – Not applicable.</p> <p>Cultural Heritage – No significant gap in the information for reviewing of archaeological potential.</p> <p>Air Quality – Not applicable.</p> <p>Noise – Not applicable.</p> <p>Water Quality – No significant difficulties in assembling or analysing data to predict impacts.</p> <p>Waste – Not applicable.</p> <p>Marine Ecology – No significant difficulties in assembling or analysing data to predict impacts.</p> <p>Landscape and Visual – Not applicable.</p> <p>Cultural Heritage – No significant difficulties in assembling or analysing information for reviewing of archaeological potential.</p> |
| <p>10. <u>Executive Summary</u></p> <p>10.1 Does the executive summary contain at least a brief description of the project and the environment, an account of the main mitigation measures to be implemented by the developer, and a description of any remaining or residual impacts?</p> <p>10.2 Have technical jargons been avoided as far as possible in the executive summary?</p> <p>10.3 Does the executive summary present the main findings of the assessment and cover all the main issues?</p> <p>10.4 Does the executive summary include a brief explanation of the overall approach to the assessment?</p> <p>10.5 Does the executive summary provide an indication of the confidence which can be placed in the results?</p> | <p>A brief description of the project is given in Sections 1.1.1 to 1.1.3 of the Executive Summary. A description of mitigation measures to be implemented and any residual impacts is presented in Section 3 of the Executive Summary.</p> <p>Unnecessary technical jargon has been avoided.</p> <p>The main findings of the assessment are presented in Section 3 of the Executive Summary.</p> <p>The overall approach of individual assessments are presented in Section 3 of the Executive Summary.</p> <p>The description of the approach and findings of the assessment presented in Section 3 of the Executive Summary gives an indication of the confidence of the</p>   |

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| 10.6 Is the executive summary presented in both English and Chinese? | <p>results.</p> <p>The Executive Summary is presented in both English and Chinese.</p> |