

**Contract No. HY/2014/05 – Hong Kong-Zhuhai-Macao Bridge Hong Kong Boundary Crossing Facilities – Remaining Ancillary Buildings and Facilities**  
**Implementation Schedule for Environmental Mitigation Measures**

| EIA Ref.           | EM&A Log Ref | Recommended Mitigation Measures                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Objectives of the Recommended Measures & Main Concerns to address                                                              | Who to implement the measures? | Location of the measures | When to implement the measures? | What requirements or standards for the measures to achieve?                                                                                                                | Implementation Status |
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| <b>Air Quality</b> |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                |                                |                          |                                 |                                                                                                                                                                            |                       |
| S5.5.6.1           | A1           | 1) The contractor shall follow the procedures and requirements given in the Air Pollution Control (Construction Dust) Regulation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Good construction site practices to control the dust impact at the nearby sensitive receivers to within the relevant criteria. | Contractor                     | All construction sites   | Construction stage              | To control the dust impact to within the HKAQO and TM-EIA criteria (Ref. 1- hr and 24hr TSP levels are 500 $\mu\text{gm}^{-3}$ and 260 $\mu\text{gm}^{-3}$ , respectively) | √                     |
| S5.5.6.2           | A2           | 2) Proper watering of exposed spoil should be undertaken throughout the construction phase: <ul style="list-style-type: none"> <li>Any excavated or stockpile of dusty material should be covered entirely by impervious sheeting or sprayed with water to maintain the entire surface wet and then removed or backfilled or reinstated where practicable within 24 hours of the excavation or unloading;</li> <li>Any dusty materials remaining after a stockpile is removed should be wetted with water and cleared from the surface of roads;</li> <li>A stockpile of dusty material should not be extend beyond the pedestrian barriers, fencing or traffic cones.</li> <li>The load of dusty materials on a vehicle leaving a construction site should be covered entirely by impervious sheeting to ensure that the dusty materials do not leak from the vehicle;</li> <li>Where practicable, vehicle washing facilities with high pressure water jet should be provided at every discernible or designated vehicle exit point. The area where vehicle washing takes place and the road section between the washing facilities and the exit point should be paved with concrete, bituminous materials or hardcores;</li> </ul> | Good construction site practices to control the dust impact at the nearby sensitive receivers to within the relevant criteria. | Contractor                     | All construction sites   | Construction stage              | To control the dust impact to within the HKAQO and TM-EIA criteria (Ref. 1- hr and 24hr TSP levels are 500 $\mu\text{gm}^{-3}$ and 260 $\mu\text{gm}^{-3}$ , respectively) | √                     |

| EIA Ref. | EM&A Log Ref | Recommended Mitigation Measures                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Objectives of the Recommended Measures & Main Concerns to address                                                              | Who to implement the measures? | Location of the measures | When to implement the measures? | What requirements or standards for the measures to achieve?                                                                                                                  | Implementation Status |
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| S5.5.6.2 | A2           | <ul style="list-style-type: none"> <li>When there are open excavation and reinstatement works, hoarding of not less than 2.4m high should be provided as far as practicable along the site boundary with provision for public crossing. Good site practice shall also be adopted by the Contractor to ensure the conditions of the hoardings are properly maintained throughout the construction period;</li> <li>The portion of any road leading only to construction site that is within 30m of a vehicle entrance or exit should be kept clear of dusty materials;</li> <li>Surfaces where any pneumatic or power-driven drilling, cutting, polishing or other mechanical breaking operation takes place should be sprayed with water or a dust suppression chemical continuously;</li> <li>Any area that involves demolition activities should be sprayed with water or a dust suppression chemical immediately prior to, during and immediately after the activities so as to maintain the entire surface wet;</li> <li>Where a scaffolding is erected around the perimeter of a building under construction, effective dust screens, sheeting or netting should be provided to enclose the scaffolding from the ground floor level of the building, or a canopy should be provided from the first floor level up to the highest level of the scaffolding;</li> <li>Any skip hoist for material transport should be totally enclosed by impervious sheeting;</li> <li>Every stock of more than 20 bags of cement or dry pulverised fuel ash (PFA) should be covered entirely by impervious sheeting or placed in an area sheltered on the top and the 3 sides;</li> </ul> | Good construction site practices to control the dust impact at the nearby sensitive receivers to within the relevant criteria. | Contractor                     | All construction sites   | Construction stage              | To control the dust impact to within the HKAQO and TM-EIA criteria (Ref. 1- hr and 24hr TSP levels are $500 \mu\text{g m}^{-3}$ and $260 \mu\text{g m}^{-3}$ , respectively) | √                     |

| EIA Ref. | EM&A Log Ref | Recommended Mitigation Measures                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Objectives of the Recommended Measures & Main Concerns to address                                                                                                   | Who to implement the measures? | Location of the measures                        | When to implement the measures? | What requirements or standards for the measures to achieve?                                                                                                                                                                                                                                                                   | Implementation Status                                                                                                                                                                                                             |
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| S5.5.6.2 | A2           | <ul style="list-style-type: none"> <li>Cement or dry PFA delivered in bulk should be stored in a closed silo fitted with an audible high level alarm which is interlocked with the material filling line and no overfilling is allowed;</li> <li>Loading, unloading, transfer, handling or storage of bulk cement or dry PFA should be carried out in a totally enclosed system or facility, and any vent or exhaust should be fitted with an effective fabric filter or equivalent air pollution control system; and</li> <li>Exposed earth should be properly treated by compaction, turfing, hydroseeding, vegetation planting or sealing with latex, vinyl, bitumen, shotcrete or other suitable surface stabiliser within six months after the last construction activity on the construction site or part of the construction site where the exposed earth lies.</li> </ul> | Good construction site practices to control the dust impact at the nearby sensitive receivers to within the relevant criteria.                                      | Contractor                     | All construction sites                          | Construction stage              | To control the dust impact to within the HKAQO and TM-EIA criteria (Ref. 1- hr and 24hr TSP levels are 500 $\mu\text{g}\text{m}^{-3}$ and 260 $\mu\text{g}\text{m}^{-3}$ , respectively)                                                                                                                                      | √                                                                                                                                                                                                                                 |
| S5.5.6.4 | A3           | The Contractor should undertake proper watering on all exposed spoil (with at least 8 times per day) throughout the construction phase.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Control construction dust                                                                                                                                           | Contractor                     | All construction sites                          | Construction stage              | To control the dust impact                                                                                                                                                                                                                                                                                                    | √                                                                                                                                                                                                                                 |
| S5.5.6.5 | A4           | Engineer to incorporate the controlled measures into the Particular Specification (PS) for the civil work. The PS should also draw the contractor's attention to the relevant latest Practice Notes issued by EPD.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Control construction dust                                                                                                                                           | Engineer                       | All construction sites                          | Design Stage                    | Air Pollution Control (Construction Dust) Regulation                                                                                                                                                                                                                                                                          | √                                                                                                                                                                                                                                 |
| S5.5.6.5 | A5           | Implement regular dust monitoring under EM&A programme during the construction stage.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Monitor the 24 hr and 1hr TSP levels at the representative dust monitoring stations to ensure compliance with relevant criteria throughout the construction period. | Contractor                     | Selected representative dust monitoring station | Construction stage              | <ul style="list-style-type: none"> <li>Air Pollution Control (Construction Dust) Regulation</li> <li>To control the dust impact to within the HKAQO and TM-EIA criteria (Ref. 1- hr and 24hr TSP levels are 500 <math>\mu\text{g}\text{m}^{-3}</math> and 260 <math>\mu\text{g}\text{m}^{-3}</math>, respectively)</li> </ul> | √<br>The (The dust monitoring at AMS6 under EM&A Programme for the Contract is covered by Contract No. HY/2011/03 while the dust monitoring at AMS7 under EM&A Programme for the Contract is covered by Contract No. HY/2013/01.) |

| EIA Ref. | EM&A Log Ref | Recommended Mitigation Measures                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Objectives of the Recommended Measures & Main Concerns to address                                                                                                   | Who to implement the measures? | Location of the measures                        | When to implement the measures? | What requirements or standards for the measures to achieve?                                                                                                                                                                                                                                                           | Implementation Status |
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| S5.5.7.1 | A6           | <p>The following mitigation measures should be adopted to prevent fugitive dust emissions for concrete batching plant:</p> <ul style="list-style-type: none"> <li>• Loading, unloading, handling, transfer or storage of any dusty materials should be carried out in totally enclosed system;</li> <li>• All dust-laden air or waste gas generated by the process operations should be properly extracted and vented to fabric filtering system to meet the emission limits for TSP;</li> <li>• Vents for all silos and cement/pulverised fuel ash (PFA) weighing scale should be fitted with fabric filtering system;</li> <li>• The materials which may generate airborne dusty emissions should be wetted by water spray system;</li> <li>• All receiving hoppers should be enclosed on three sides up to 3m above unloading point;</li> <li>• All conveyor transfer points should be totally enclosed;</li> <li>• All access and route roads within the premises should be paved and wetted; and</li> <li>• Vehicle cleaning facilities should be provided and used by all concrete trucks before leaving the premises to wash off any dust on the wheels and/or body.</li> </ul> | Monitor the 24 hr and 1hr TSP levels at the representative dust monitoring stations to ensure compliance with relevant criteria throughout the construction period. | Contractor                     | Selected representative dust monitoring station | Construction stage              | <ul style="list-style-type: none"> <li>• Air Pollution Control (Construction Dust) Regulation</li> <li>• To control the dust impact to within the HKAQO and TM-EIA criteria (Ref. 1- hr and 24hr TSP levels are <math>500 \mu\text{g m}^{-3}</math> and <math>260 \mu\text{g m}^{-3}</math>, respectively)</li> </ul> | N/A                   |
| S5.5.2.7 | A7           | <p>The following mitigation measures should be adopted to prevent fugitive dust emissions at barging point:</p> <ul style="list-style-type: none"> <li>• All road surface within the barging facilities will be paved;</li> <li>• Dust enclosures will be provided for the loading ramp;</li> <li>• Vehicles will be required to pass through designated wheels wash facilities; and</li> <li>• Continuous water spray at the loading points.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Control construction dust                                                                                                                                           | Contractor                     | All construction sites                          | Construction stage              | Air Pollution Control (Construction Dust) Regulation                                                                                                                                                                                                                                                                  | N/A                   |

| EIA Ref.                              | EM&A Log Ref | Recommended Mitigation Measures                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Objectives of the Recommended Measures & Main Concerns to address                         | Who to implement the measures? | Location of the measures                                                          | When to implement the measures? | What requirements or standards for the measures to achieve?                                                                                                                                                                               | Implementation Status |
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| <b>Construction Noise (Air borne)</b> |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                           |                                |                                                                                   |                                 |                                                                                                                                                                                                                                           |                       |
| S6.4.10                               | N1           | <p>1) Use of good site practices to limit noise emissions by considering the following:</p> <ul style="list-style-type: none"> <li>only well-maintained plant should be operated on-site and plant should be serviced regularly during the construction programme;</li> <li>machines and plant (such as trucks, cranes) that may be in intermittent use should be shut down between work periods or should be throttled down to a minimum;</li> <li>plant known to emit noise strongly in one direction, where possible, be orientated so that the noise is directed away from nearby NSRs;</li> <li>silencers or mufflers on construction equipment should be properly fitted and maintained during the construction works;</li> <li>mobile plant should be sited as far away from NSRs as possible and practicable;</li> <li>material stockpiles, mobile container site office and other structures should be effectively utilised, where practicable, to screen noise from on-site construction activities.</li> </ul> | Control construction airborne noise by means of good site practices                       | Contractor                     | All construction sites                                                            | Construction stage              | Noise Control Ordinance                                                                                                                                                                                                                   | √                     |
| S6.4.11                               | N2           | 2) Install temporary hoarding located on the site boundaries between noisy construction activities and NSRs. The conditions of the hoardings shall be properly maintained throughout the construction period.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Reduce the construction noise levels at low-level zone of NSRs through partial screening. | Contractor                     | All construction sites                                                            | Construction stage              | <ul style="list-style-type: none"> <li>Noise Control Ordinance</li> <li>Annex 5, TM-EIA</li> </ul>                                                                                                                                        | N/A                   |
| S6.4.12                               | N3           | 3) Install movable noise barriers (typically density @14kg/m <sup>2</sup> ), acoustic mat or full enclosure close to noisy plants including air compressor, generators, saw.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Screen the noisy plant items to be used at all construction sites                         | Contractor                     | For plant items listed in Appendix 6D of the EIA report at all construction sites | Construction stage              | <ul style="list-style-type: none"> <li>Noise Control Ordinance</li> <li>Annex 5, TM-EIA</li> <li>75dB(A) for residential premises</li> <li>The movable barrier should achieve at least 5dB(A) and the full enclosure should be</li> </ul> | N/A                   |

| EIA Ref.        | EM&A Log Ref | Recommended Mitigation Measures                                                                                                                                  | Objectives of the Recommended Measures & Main Concerns to address                        | Who to implement the measures? | Location of the measures                                                          | When to implement the measures? | What requirements or standards for the measures to achieve?                                                                                  | Implementation Status                                                                                                           |
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| S6.4.13         | N4           | 4) Select "Quiet plants" which comply with the BS 5228 Part 1 or TM standards.                                                                                   | Reduce the noise levels of plant items                                                   | Contractor                     | For plant items listed in Appendix 6D of the EIA report at all construction sites | Construction stage              | <ul style="list-style-type: none"> <li>Noise Control Ordinance &amp; its TM</li> <li>Annex 5, TM-EIA</li> </ul>                              | √                                                                                                                               |
| S6.4.14         | N5           | 5) Sequencing operation of construction plants where practicable.                                                                                                | Operate sequentially within the same work site to reduce the construction airborne noise | Contractor                     | All construction sites where practicable                                          | Construction stage              | <ul style="list-style-type: none"> <li>Noise Control Ordinance</li> <li>Annex 5, TM-EIA</li> </ul>                                           | √                                                                                                                               |
| /               | N6           | 6) Implement a noise monitoring under EM&A programme.                                                                                                            | Monitor the construction noise levels at the selected representative locations           | Contractor                     | Selected representative noise monitoring station                                  | Construction stage              | <ul style="list-style-type: none"> <li>Noise Control Ordinance</li> <li>Annex 5, TM-EIA</li> <li>75dB(A) for residential premises</li> </ul> | √<br>The (The noise monitoring at NMS2 and NMS3B under EM&A programme for the Contract are covered by Contract No. HY/2013/01.) |
| <b>Sediment</b> |              |                                                                                                                                                                  |                                                                                          |                                |                                                                                   |                                 |                                                                                                                                              |                                                                                                                                 |
| S7.3            | S1           | 1) The requirements as recommended in ETWB TC 34/2002 Management of Dredged/Excavated Sediment shall be included in the Particular Specification as appropriate. | Develop sediment disposal arrangement                                                    | Engineer                       | All construction sites                                                            | Design stage                    | <ul style="list-style-type: none"> <li>Waste Disposal Ordinance</li> <li>ETW B TC 34/2002</li> </ul>                                         | N/A                                                                                                                             |

| EIA Ref.                                     | EM&A Log Ref | Recommended Mitigation Measures                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Objectives of the Recommended Measures & Main Concerns to address                                                                                     | Who to implement the measures? | Location of the measures | When to implement the measures? | What requirements or standards for the measures to achieve?                                                                                                  | Implementation Status |
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| <b>Waste Management (Construction Waste)</b> |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                       |                                |                          |                                 |                                                                                                                                                              |                       |
| S8.3.8                                       | WM1          | <p><u>Construction and Demolition Material</u></p> <p>The following mitigation measures should be implemented in handling the waste:</p> <ul style="list-style-type: none"> <li>• Maintain temporary stockpiles and reuse excavated fill material for backfilling and reinstatement;</li> <li>• Carry out on-site sorting;</li> <li>• Make provisions in the Contract documents to allow and promote the use of recycled aggregates where appropriate;</li> <li>• Adopt 'Selective Demolition' technique to demolish the existing structures and facilities with a view to recovering broken concrete effectively for recycling purpose, where possible;</li> <li>• Implement a trip-ticket system for each works contract to ensure that the disposal of C&amp;D materials are properly documented and verified; and</li> <li>• Implement an enhanced Waste Management Plan similar to ETW BTC (Works) No. 19/2005 – "Environmental Management on Construction Sites" to encourage on-site sorting of C&amp;D materials and to minimize their generation during the course of construction.</li> <li>• In addition, disposal of the C&amp;D materials onto any sensitive locations such as agricultural lands, etc. should be avoided. The Contractor shall propose the final disposal sites to the Project Proponent and get its approval before implementation.</li> </ul> | Good site practice to minimize the waste generation and recycle the C&D materials as far as practicable so as to reduce the amount for final disposal | Contractor                     | All construction sites   | Construction stage              | <ul style="list-style-type: none"> <li>• Land (Miscellaneous Provisions) Ordinance</li> <li>• Waste Disposal Ordinance</li> <li>• ETW BTC 19/2005</li> </ul> | √                     |

| EIA Ref.        | EM&A Log Ref | Recommended Mitigation Measures                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Objectives of the Recommended Measures & Main Concerns to address                                                                                     | Who to implement the measures? | Location of the measures | When to implement the measures? | What requirements or standards for the measures to achieve?                                                                                                                               | Implementation Status |
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| S8.3.9-S8.3.11  | WM2          | <u>C&amp;D Waste</u> <ul style="list-style-type: none"> <li>Standard formwork or pre-fabrication should be used as far as practicable in order to minimise the arising of C&amp;D materials. The use of more durable formwork or plastic facing for the construction works should be considered. Use of wooden hoardings should not be used, as in other projects. Metal hoarding should be used to enhance the possibility of recycling. The purchasing of construction materials will be carefully planned in order to avoid over ordering and wastage.</li> <li>The Contractor should recycle as much of the C&amp;D materials as possible on-site. Public fill and C&amp;D waste should be segregated and stored in different containers or skips to enhance reuse or recycling of materials and their proper disposal. Where practicable, concrete and masonry can be crushed and used as fill. Steel reinforcement bar can be used by scrap steel mills. Different areas of the sites should be considered for such segregation and storage.</li> </ul>                                                                                                                                                                                            | Good site practice to minimize the waste generation and recycle the C&D materials as far as practicable so as to reduce the amount for final disposal | Contractor                     | All construction sites   | Construction stage              | <ul style="list-style-type: none"> <li>Land (Miscellaneous Provisions) Ordinance</li> <li>Waste Disposal Ordinance</li> <li>ETWB TC 19/2005</li> </ul>                                    | √                     |
| S8.2.12-S8.3.15 | WM3          | <u>Chemical Waste</u> <ul style="list-style-type: none"> <li>Chemical waste that is produced, as defined by Schedule 1 of the Waste Disposal (Chemical Waste) (General) Regulation, should be handled in accordance with the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes.</li> <li>Containers used for the storage of chemical wastes should be suitable for the substance they are holding, resistant to corrosion, maintained in a good condition, and securely closed; have a capacity of less than 450 liters unless the specification has been approved by the EPD; and display a label in English and Chinese in accordance with instructions prescribed in Schedule 2 of the regulation.</li> <li>The storage area for chemical wastes should be clearly labelled and used solely for the storage of chemical waste; enclosed on at least 3 sides; have an impermeable floor and bunding of sufficient capacity to accommodate 110% of the volume of the largest container or 20 % of the total volume of waste stored in that area, whichever is the greatest; have adequate ventilation; covered to prevent rainfall entering; and arranged so that incompatible materials are adequately separated.</li> </ul> | Control the chemical waste and ensure proper storage, handling and disposal.                                                                          | Contractor                     | All construction sites   | Construction stage              | <ul style="list-style-type: none"> <li>Waste Disposal (Chemical Waste) General) Regulation</li> <li>Code of Practice on the Packaging, Labelling and Storage of Chemical Waste</li> </ul> | √                     |

| EIA Ref. | EM&A Log Ref | Recommended Mitigation Measures                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Objectives of the Recommended Measures & Main Concerns to address                  | Who to implement the measures? | Location of the measures | When to implement the measures? | What requirements or standards for the measures to achieve?                | Implementation Status |
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|          |              | <ul style="list-style-type: none"> <li>Disposal of chemical waste should be via a licensed waste collector; be to a facility licensed to receive chemical waste, such as the Chemical Waste Treatment Centre which also offers a chemical waste collection service and can supply the necessary storage containers; or be to a reuser of the waste, under approval from the EPD.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                    |                                |                          |                                 |                                                                            | √                     |
| S8.3.16  | WM4          | <u>Sewage</u> <ul style="list-style-type: none"> <li>Adequate numbers of portable toilets should be provided for the workers. The portable toilets should be maintained in a state, which will not deter the workers from utilizing these portable toilets. Night soil should be collected by licensed collectors regularly.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Proper handling of sewage from worker to avoid odour, pest and litter impacts      | Contractor                     | All construction sites   | Construction stage              | <ul style="list-style-type: none"> <li>Waste Disposal Ordinance</li> </ul> | √                     |
| S8.3.17  | WM5          | <u>General Refuse</u> <ul style="list-style-type: none"> <li>General refuse generated on-site should be stored in enclosed bins or compaction units separately from construction and chemical wastes.</li> <li>A reputable waste collector should be employed by the Contractor to remove general refuse from the site, separately from construction and chemical wastes, on a daily basis to minimize odour, pest and litter impacts. Burning of refuse on construction sites is prohibited by law.</li> <li>Aluminium cans are often recovered from the waste stream by individual collectors if they are segregated and made easily accessible. Separate labelled bins for their deposit should be provided if feasible.</li> <li>Office wastes can be reduced through the recycling of paper if volumes are large enough to warrant collection. Participation in a local collection scheme should be considered by the Contractor. In addition, waste separation facilities for paper, aluminum cans, plastic bottles etc., should be provided.</li> <li>Training should be provided to workers about the concepts of site cleanliness and appropriate waste management procedure, including reduction, reuse and recycling of wastes.</li> </ul> | Minimize production of the general refuse and avoid odour, pest and litter impacts | Contractor                     | All construction sites   | Construction stage              | <ul style="list-style-type: none"> <li>Waste Disposal Ordinance</li> </ul> | √                     |

| EIA Ref.                                  | EM&A Log Ref | Recommended Mitigation Measures                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Objectives of the Recommended Measures & Main Concerns to address | Who to implement the measures? | Location of the measures | When to implement the measures? | What requirements or standards for the measures to achieve? | Implementation Status |
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| <b>Water Quality (Construction Phase)</b> |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                   |                                |                          |                                 |                                                             |                       |
| S.9.11.1.7                                | W2           | <p><u>Land Works</u><br/>General construction activities on land should also be governed by standard good working practice. Specific measures to be written into the works contracts should include:</p> <ul style="list-style-type: none"> <li>wastewater from temporary site facilities should be controlled to prevent direct discharge to surface or marine waters;</li> <li>sewage effluent and discharges from on-site kitchen facilities shall be directed to Government sewer in accordance with the requirements of the WPCO or collected for disposal offsite. The use of soakaways shall be avoided;</li> <li>storm drainage shall be directed to storm drains via adequately designed sand/silt removal facilities such as sand traps, silt traps and sediment basins. Channels, earth bunds or sand bag barriers should be provided on site to properly direct stormwater to such silt removal facilities. Catchpits and perimeter channels should be constructed in advance of site formation works and earthworks;</li> <li>silt removal facilities, channels and manholes shall be maintained and any deposited silt and grit shall be removed regularly, including specifically at the onset of and after each rainstorm;</li> <li>temporary access roads should be surfaced with crushed stone or gravel;</li> <li>rainwater pumped out from trenches or foundation excavations should be discharged into storm drains via silt removal facilities;</li> <li>measures should be taken to prevent the washout of construction materials, soil, silt or debris into any drainage system;</li> <li>open stockpiles of construction materials (e.g. aggregates and sand) on site should be covered with tarpaulin or similar fabric during rainstorms;</li> <li>manholes (including any newly constructed ones) should always be adequately covered and temporarily sealed so as to prevent silt, construction materials or debris from getting into the drainage system, and to prevent storm run-off from getting into foul sewers;</li> <li>discharges of surface run-off into foul sewers must always be prevented in order not to unduly overload the foul sewerage system;</li> </ul> | To control construction water quality                             | Contractor                     | Land-based works areas   | Construction stage              | TM-EIAO                                                     | √                     |

| EIA Ref.  | EM&A Log Ref | Recommended Mitigation Measures                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Objectives of the Recommended Measures & Main Concerns to address | Who to implement the measures? | Location of the measures | When to implement the measures? | What requirements or standards for the measures to achieve? | Implementation Status |
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| S9.11.1.7 | W2           | <ul style="list-style-type: none"> <li>all vehicles and plant should be cleaned before they leave the construction site to ensure that no earth, mud or debris is deposited by them on roads. A wheel washing bay should be provided at every site exit;</li> <li>wheel wash overflow shall be directed to silt removal facilities before being discharged to the storm drain;</li> <li>the section of construction road between the wheel washing bay and the public road should be surfaced with crushed stone or coarse gravel;</li> <li>wastewater generated from concreting, plastering, internal decoration, cleaning work and other similar activities, shall be screened to remove large objects;</li> <li>vehicle and plant servicing areas, vehicle wash bays and lubrication facilities shall be located under roofed areas. The drainage in these covered areas shall be connected to foul sewers via a petrol interceptor in accordance with the requirements of the WPCO or collected for off site disposal;</li> <li>the contractors shall prepare an oil / chemical cleanup plan and ensure that leakages or spillages are contained and cleaned up immediately;</li> <li>waste oil should be collected and stored for recycling or disposal, in accordance with the Waste Disposal Ordinance;</li> <li>all fuel tanks and chemical storage areas should be provided with locks and be sited on sealed areas. The storage areas should be surrounded by bunds with a capacity equal to 110% of the storage capacity of the largest tank; and</li> <li>surface run-off from bunded areas should pass through oil/grease traps prior to discharge to the stormwater system.</li> </ul> | To control construction water quality                             | Contractor                     | Land-based works areas   | Construction stage              | TM-EIAO                                                     | √                     |

| EIA Ref.                            | EM&A Log Ref | Recommended Mitigation Measures                                                                                                                                                                                                                                                                 | Objectives of the Recommended Measures & Main Concerns to address | Who to implement the measures? | Location of the measures | When to implement the measures? | What requirements or standards for the measures to achieve? | Implementation Status |
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| <b>Ecology (Construction Phase)</b> |              |                                                                                                                                                                                                                                                                                                 |                                                                   |                                |                          |                                 |                                                             |                       |
| S10.7                               | E4           | <ul style="list-style-type: none"> <li>Watering to reduce dust generation; prevention of siltation of freshwater habitats; Site runoff should be desilted, to reduce the potential for suspended sediments, organics and other contaminants to enter streams and standing freshwater</li> </ul> | Prevent Sedimentation from Land-based works areas                 | Contractor                     | Land-based works areas   | During construction             | TM-Water                                                    | √                     |
| S10.7                               | E5           | <ul style="list-style-type: none"> <li>Good site practices, including strictly following the permitted works hours, using quieter machines where practicable, and avoiding excessive lightings during night time</li> </ul>                                                                     | Prevent disturbance to terrestrial fauna and habitats             | Contractor                     | Land-based works areas   | During construction             |                                                             | √                     |
| S10.7                               | E8           | <ul style="list-style-type: none"> <li>Control vessel speed</li> <li>Skipper training</li> <li>Predefined and regular routes for working vessels; avoid Brother Islands.</li> </ul>                                                                                                             | Minimise marine traffic disturbance on dolphins                   | Contractor                     | Marine Traffic           | During construction             |                                                             | N/A                   |
| <b>Fisheries</b>                    |              |                                                                                                                                                                                                                                                                                                 |                                                                   |                                |                          |                                 |                                                             |                       |
| S11.7                               | F4           | <ul style="list-style-type: none"> <li>Maritime Oil Spill Response Plan (MOSRP);</li> <li>Contingency plan.</li> </ul>                                                                                                                                                                          | Minimise impacts on marine water quality impacts                  | Marine Department              | HKBCF                    | During operation                |                                                             | N/A                   |

| EIA Ref.                                              | EM&A Log Ref | Recommended Mitigation Measures                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Objectives of the Recommended Measures & Main Concerns to address | Who to implement the measures? | Location of the measures | When to implement the measures? | What requirements or standards for the measures to achieve? | Implementation Status |
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| <b>Landscape &amp; Visual (Detailed Design Phase)</b> |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                   |                                |                          |                                 |                                                             |                       |
| S14.3.3.1                                             | LV1          | <p>General design measures include:</p> <ul style="list-style-type: none"> <li>Roadside planting and planting along the edge of the HKBCF Island is proposed;</li> <li>Transplanting of mature trees in good health and amenity value where appropriate and reinstatement of areas disturbed during construction by compensatory hydro-seeding and planting;</li> <li>Protection measures for the trees to be retained during construction activities;</li> <li>Optimizing the sizes and spacing of the bridge columns; Fine-tuning the location of the bridge columns to avoid visually-sensitive locations;</li> <li>Maximizing new tree, shrub and other vegetation planting to compensate tree felled and vegetation removed;</li> <li>Providing planting area around peripheral of HKBCF for tree planting screening effect;</li> <li>Providing salt-tolerant native trees along the planter strip at affected seawall and newly reclaimed coastline;</li> <li>For HKBCF, providing aesthetic architectural design on the related buildings (e.g. similar materials for PCB building facade to Airport buildings, roof planting and subtle materials for other facilities buildings and so on), and the related infrastructure (e.g. parapet planting and transparent cover for elevated footbridges) to provide harmonious atmosphere of the HKBCF; and</li> <li>Fine-tuning the sizes of the structural members to minimize the bulkiness of buildings and adjustment of building arrangement to minimise disturbance to surrounding vegetation in the HKBCF.</li> </ul> | Minimise visual & landscape impact                                | Detailed designer              | HKBCF                    | Design Stage                    |                                                             | N/A                   |

| EIA Ref.                                           | EM&A Log Ref | Recommended Mitigation Measures                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Objectives of the Recommended Measures & Main Concerns to address | Who to implement the measures? | Location of the measures | When to implement the measures? | What requirements or standards for the measures to achieve? | Implementation Status    |
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| <i>Landscape &amp; Visual (Construction Phase)</i> |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                   |                                |                          |                                 |                                                             |                          |
| S14.3.3.3                                          | LV2          | <p>Mitigate both Landscape and Visual Impacts</p> <p>G1. Grass-hydroseed bare soil surface and stock pile areas.</p> <p>G2. Add planting strip and automatic irrigation system if appropriate at some portions of bridge footbridge to screen bridge and traffic.</p> <p>G3. Not applicable as this is for HKLR.</p> <p>G4. For HKBCF, providing aesthetic architectural design on the related buildings (e.g. similar materials for PCB building facade to Airport buildings, roof planting and subtle materials for other facilities buildings and so on), and the related infrastructure (e.g. parapet planting and transparent cover for elevated footbridges) to provide harmonious atmosphere of the HKBCF</p> <p>G5. Vegetation reinstatement and upgrading to disturbed areas</p> <p>G6. Maximizing new tree shrub and other vegetation planting to compensate tree felled and vegetation removed</p> <p>G7. Providing planting area around peripheral of HKBCF for tree planting screening effect;</p> <p>G8. Plant salt-tolerant native and shrubs etc along the planter strip at affected seawall.</p> <p>G9. Reserve of loose natural granite rocks for re-use. Provide new coastline to adopt "natural-look" by means of using armour rocks in the form of natural rock materials and planting strip area accommodating screen buffer to enhance "natural-look" of the new coastline.</p> | Minimise visual & landscape impact                                | Contractor                     | HKBCF                    | Construction stage              |                                                             | N/A                      |
| S14.3.3.3                                          | LV3          | <p><u>Mitigate Visual Impacts</u></p> <p>V1.Minimize time for construction activities during construction period.</p> <p>V2.Provide screen hoarding at the portion of the project site / works areas / storage areas near VSRs who have close low-level views to the Project during HKBCF construction.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                   |                                |                          |                                 |                                                             | √ for V1.<br>N/A for V2. |

| EIA Ref.        | EM&A Log Ref | Recommended Mitigation Measures                                                                                                                                                                                                                                                                                                                                                    | Objectives of the Recommended Measures & Main Concerns to address | Who to implement the measures? | Location of the measures | When to implement the measures? | What requirements or standards for the measures to achieve?                                     | Implementation Status |
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| <b>EM&amp;A</b> |              |                                                                                                                                                                                                                                                                                                                                                                                    |                                                                   |                                |                          |                                 |                                                                                                 |                       |
| S15.2.2         | EM1          | An Independent Environmental Checker needs to be employed as per the EM&A Manual.                                                                                                                                                                                                                                                                                                  | Control EM&A Performance                                          | Project Proponent              | All construction sites   |                                 | <ul style="list-style-type: none"> <li>EIAO Guidance Note No.4/2002</li> <li>TM-EIAO</li> </ul> | √                     |
| S15.5 - S15.6   | EM2          | 1) An Environmental Team needs to be employed as per the EM&A Manual.<br><br>2) Prepare a systematic Environmental Management Plan to ensure effective implementation of the mitigation measures.<br><br>3) An environmental impact monitoring needs to be implementing by the Environmental Team to ensure all the requirements given in the EM&A Manual are fully complied with. | Perform environmental monitoring & auditing                       | Contractor                     | All construction sites   |                                 | <ul style="list-style-type: none"> <li>EIAO Guidance Note No.4/2002</li> <li>TM-EIAO</li> </ul> | √                     |

Legends: √ = Implemented; X = Not implemented; N/A = Not applicable