

**Environmental Mitigation Implementation Schedule
Tung Chung Line Extension**

Note: Sections 1 to 2 of the EIA report present the background information of the Project, identified concurrent projects, objectives and scope for various environmental aspects, and description on alternative options and construction description. Sections 3 to 12 of the EIA report present the EIA findings and mitigation measures are described below with cross-reference to the EIA report. Sections 13 to 15 describe the environmental monitoring requirements, summary of environmental outcomes and conclusion.

| EIA Ref. | EM&A Log Ref | Recommended Mitigation Measures | Objectives of the Recommended Measures & Main Concerns to address | Implementation Agent | Location / Timing | Implementation Phase | Requirements and / or standards to be achieved |
|---------------------------------|--------------|---|---|----------------------|------------------------|----------------------|--|
| Construction Dust Impact | | | | | | | |
| S3.8.1 | D1 | <p>The following dust suppression measures/practices should be incorporated:</p> <ul style="list-style-type: none"> • Regular watering once per hour on all exposed construction areas with dust emission and haul road will be implemented; • Vehicle washing facilities should be provided at every designated exit point of the construction worksites; • 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 for the excavation or unloading; • Any dusty materials remaining after a stockpile is removed should be wetted with water and cleared from the surface of roads; • A stockpile of dusty material should not be extended beyond the pedestrian barriers, fencing or traffic cones; • 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; | Minimise dust impact at the nearby sensitive receivers | Contractor | All construction sites | Construction phase | <ul style="list-style-type: none"> • APCO • To control the dust impact to meet HKAQO and EIAO-TM |

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| | | <ul style="list-style-type: none"> • 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; • 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; • The portion of any road leading only to the construction site that is within 30m of a vehicle entrance or exit should be kept clear of dusty materials; • 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; • 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; | | | | | |

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| | | <ul style="list-style-type: none"> • Where 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; • Any skip hoist for material transport should be totally enclosed by impervious sheeting; • 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; • 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; • 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 • Exposed earth should be properly treated by compaction, turfing, hydroseeding, vegetation planting or sealing with latex, vinyl, bitumen, shotcrete or other suitable surface stabilisers within six months after the last construction activity on the construction site or part of the construction site where the exposed earth lies. | | | | | |

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| | | <p>The following measures related to drill-&-blast activities should be incorporated:</p> <ul style="list-style-type: none"> • Any drill-&-blast activities should be conducted underneath the concrete slabs for concourses and platforms at the bottom of the TCW Station and underneath a roof cover at the bottom of the shaft between the proposed EAP / EEP and the tunnel; • Impermeable blast covers at the mucking out locations should be shut; • The blasting should only be carried out in a fully enclosed environment; • All neighbouring construction activities should be suspended during blasting; • The areas within 30m from the blasting area should be wetted with water prior to blasting and blasting shall not be carried out when the strong wind signal or tropical cyclone warning signal No. 3 or higher is hoisted; • Where necessary, mist spraying measures should be installed at the mucking out locations. <p>The following measures related to barging facilities should be incorporated:</p> <ul style="list-style-type: none"> • All construction vehicles should be washed at the exit before leaving the construction worksites; • The entire area of the barging facility should be paved with concrete, bituminous materials or hardcores; | | | | | |

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| | | <ul style="list-style-type: none"> • Regular watering once per hour on all exposed stockpiles; • The unloading points at the barging facility are recommended to be provided with an enclosed system with a 3-side screen with top cover and provision of water spraying system; • After unloading the spoil into barge inside the enclosed system, the trucks should be sprayed by water inside the unloading point; and • If barges would need to stay overnight at the barging point, spoils on the deck of the barges shall be covered by tarpaulin to avoid dust emission. | | | | | |
| S3.8.2 | D2 | <p>The following good site practices to reduce the exhaust emission from the use of non-road mobile machinery and construction plant and equipment should be implemented:</p> <ul style="list-style-type: none"> • Regulated machines shall be used and exempted NRMMs should be avoided where practicable; • Use cleaner fuel such as ULSD in diesel-operated construction plant to reduce sulphur dioxide emission; • Use of electric PMEs where practicable; • Use power supplied from power utilities when practicable (e.g. to replace generators); • Switch off the engine of PMEs when idling; • Implement regular and proper maintenance for plant and equipment; | Control emissions from non-road mobile machinery | Contractor | All construction sites | Construction phase | <ul style="list-style-type: none"> • Air Pollution Control (NRMMs)(Emission) Regulation • To control the fuel combustion emission from PMEs |

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| | | <ul style="list-style-type: none"> Employ plant and equipment of adequate size and power output and avoid overloading of the plant; Locate the PMEs away from sensitive receivers as far as possible; and Erect screen to shield the emission source from sensitive receivers where necessary and practicable. | | | | | |
| S3.8.1 | D3 | Implement regular dust monitoring under EM&A programme during the construction phase. | Monitoring of dust impact | Contractor | Selected dust monitoring stations | Construction phase | <ul style="list-style-type: none"> EIAO-TM |
| Construction Noise | | | | | | | |
| S4.4.4.4 | N1 | <p>The following measures should be implemented:</p> <ul style="list-style-type: none"> only well-maintained plant should be operated on-site and plant should be serviced regularly during the construction programme; 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; plant known to emit noise strongly in one direction, where possible, be orientated so that the noise is directed away from nearby NSRs; silencers or mufflers which available on construction equipment should be properly fitted and maintained during the construction works; spoil transportation routes should be directed away from NSRs as far as practicable; | Control construction airborne noise | Contractor | All construction sites | Construction phase | <ul style="list-style-type: none"> Annex 5, EIAO-TM |

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| | | <ul style="list-style-type: none"> mobile plant should be sited as far away from NSRs as possible and practicable; material stockpiles, site office and other structures should be effectively utilised, where practicable, to screen noise from on-site construction activities; noise monitoring at selected NSRs should be conducted as far as practicable; and provide designated unloading areas at barging point away from the NSR as far as possible. | | | | | |
| S4.4.4.6 | N2 | Use of quiet plant which should be made reference to the Powered Mechanical Equipment (PME) listed in the Technical Memorandum or the Quality Powered Mechanical Equipment (QPME) / other commonly used PME listed in Environmental Protection Department (EPD) web pages as far as possible which includes the Sound Power Level (SWLs) for specific quiet PME. | Reduce the noise levels from plant items | Contractor | All construction sites where practicable | Construction phase | <ul style="list-style-type: none"> Annex 5, EIAO-TM |
| S4.4.4.7 – S4.4.4.10 | N3 | Install movable temporary noise barriers (typical design is wooden framed barrier with a small-cantilevered upper portion of superficial density no less than 7kg/m ² on a skid footing with 25mm thick internal sound absorptive lining), and full enclosure, screen the noisy plants including water pump etc. | Minimise the construction noise levels through screening | Contractor | All construction sites | Construction phase | <ul style="list-style-type: none"> Annex 5, EIAO-TM |
| S4.4.4.11 | N4 | Use of 3-side temporary movable enclosure to screen trench cutters and concrete lorry mixer near Yat Tung Estate. The design of the enclosure shall include the followings: <ul style="list-style-type: none"> Gaps and openings at joints should be avoided; Enclose the equipment on three sides with cover; and | Minimise the construction noise levels through screening | Contractor | Construction of diaphragm wall near Yat Tung Estate | Construction phase | <ul style="list-style-type: none"> Annex 5, EIAO-TM |

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| | | <ul style="list-style-type: none"> Absorptive lining should be provided at the sides facing the PME as far as practicable. | | | | | | | | | | | | | | |
| S4.4.4.12 | N5 | <p>Installation of noise barrier along the western side of site boundary to screen noise for the village houses of Ma Wan Chung. The location of noise barrier is shown in the Figure 4.4.1 of the EIA report. The design of the noise barrier should include the followings:</p> <ul style="list-style-type: none"> Gaps and openings at joints should be avoided; The length of the barrier should be about 27m while the height should be about 4m; and Surface density of the barrier no less than 7kg/m². | Minimise the construction noise levels through screening | Contractor | Construction of TCW Station and associated above-ground structures | Construction phase | <ul style="list-style-type: none"> Annex 5, EIAO-TM | | | | | | | | | |
| S4.4.4.4 | N6 | Implement an airborne construction noise monitoring under EM&A programme. | Monitor the airborne construction noise levels at the selected representative locations | Contractor | Selected noise monitoring stations | Construction phase | <ul style="list-style-type: none"> Annex 5, EIAO-TM | | | | | | | | | |
| Operational Noise | | | | | | | | | | | | | | | | |
| S4.6.4.1 | N7 | <p>MTR Corporation shall implement the following proposed mitigation measure:</p> <table border="1"> <thead> <tr> <th>No.</th> <th>Location</th> <th>Type of Mitigation Measures</th> </tr> </thead> <tbody> <tr> <td colspan="3">Scenario A</td> </tr> <tr> <td>A1</td> <td>The existing TCL down track and up track rail track starting from the end of existing barrier after 80m removal</td> <td>Speed reduction from 135km/h to 50km/h for TCL</td> </tr> </tbody> </table> | No. | Location | Type of Mitigation Measures | Scenario A | | | A1 | The existing TCL down track and up track rail track starting from the end of existing barrier after 80m removal | Speed reduction from 135km/h to 50km/h for TCL | Minimise the rail noise levels through speed reduction | MTR Corporation | According to the respective construction programme | During Scenario A | <ul style="list-style-type: none"> NCO EIAO-TM |
| No. | Location | Type of Mitigation Measures | | | | | | | | | | | | | | |
| Scenario A | | | | | | | | | | | | | | | | |
| A1 | The existing TCL down track and up track rail track starting from the end of existing barrier after 80m removal | Speed reduction from 135km/h to 50km/h for TCL | | | | | | | | | | | | | | |

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|-------------------|--|--|---|----------------------|------------------------------|----------------------------|--|--|----|------------------------------------|---|----|--|---------------------|-------------------|--|--|----|------------------------------------|---|----|--|---------------------|-------------------|--|--|----|------------------------------------|---|----|--|---------------------|--|-----------------|--|-------------------------------------|--|
| S4.6.4.1 | N8 | <p>The MTR Corporation shall implement the following proposed mitigation measures:</p> <table border="1" data-bbox="405 384 1050 1198"> <thead> <tr> <th data-bbox="405 384 472 443">No.</th> <th data-bbox="472 384 763 443">Location</th> <th data-bbox="763 384 1050 443">Type of Mitigation Measures</th> </tr> </thead> <tbody> <tr> <td colspan="3" data-bbox="405 443 1050 480">Scenario B</td> </tr> <tr> <td data-bbox="405 480 472 571">B1</td> <td data-bbox="472 480 763 571">Along the realigned TCL down track</td> <td data-bbox="763 480 1050 571">7m vertical with 3.5m cantilevered arm noise barriers</td> </tr> <tr> <td data-bbox="405 571 472 699">B2</td> <td data-bbox="472 571 763 699">Within the TCE station for TCL down track and part of the realigned TCL up track</td> <td data-bbox="763 571 1050 699">5m vertical barrier</td> </tr> <tr> <td colspan="3" data-bbox="405 699 1050 735">Scenario C</td> </tr> <tr> <td data-bbox="405 735 472 826">C1</td> <td data-bbox="472 735 763 826">Along the realigned TCL down track</td> <td data-bbox="763 735 1050 826">7m vertical with 3.5m cantilevered arm noise barriers</td> </tr> <tr> <td data-bbox="405 826 472 954">C2</td> <td data-bbox="472 826 763 954">Within the TCE station for TCL down track and part of the realigned TCL up track</td> <td data-bbox="763 826 1050 954">5m vertical barrier</td> </tr> <tr> <td colspan="3" data-bbox="405 954 1050 991">Scenario D</td> </tr> <tr> <td data-bbox="405 991 472 1082">D1</td> <td data-bbox="472 991 763 1082">Along the realigned TCL down track</td> <td data-bbox="763 991 1050 1082">7m vertical with 3.5m cantilevered arm noise barriers</td> </tr> <tr> <td data-bbox="405 1082 472 1198">D2</td> <td data-bbox="472 1082 763 1198">Within the TCE station for TCL down track and part of the realigned TCL up track</td> <td data-bbox="763 1082 1050 1198">5m vertical barrier</td> </tr> </tbody> </table> | No. | Location | Type of Mitigation Measures | Scenario B | | | B1 | Along the realigned TCL down track | 7m vertical with 3.5m cantilevered arm noise barriers | B2 | Within the TCE station for TCL down track and part of the realigned TCL up track | 5m vertical barrier | Scenario C | | | C1 | Along the realigned TCL down track | 7m vertical with 3.5m cantilevered arm noise barriers | C2 | Within the TCE station for TCL down track and part of the realigned TCL up track | 5m vertical barrier | Scenario D | | | D1 | Along the realigned TCL down track | 7m vertical with 3.5m cantilevered arm noise barriers | D2 | Within the TCE station for TCL down track and part of the realigned TCL up track | 5m vertical barrier | Minimise the rail noise levels through screening | MTR Corporation | According to the construction programme of different scenarios | During the respective Scenarios B-D | <ul style="list-style-type: none"> • NCO • EIAO-TM |
| No. | Location | Type of Mitigation Measures | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Scenario B | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| B1 | Along the realigned TCL down track | 7m vertical with 3.5m cantilevered arm noise barriers | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| B2 | Within the TCE station for TCL down track and part of the realigned TCL up track | 5m vertical barrier | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Scenario C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| C1 | Along the realigned TCL down track | 7m vertical with 3.5m cantilevered arm noise barriers | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| C2 | Within the TCE station for TCL down track and part of the realigned TCL up track | 5m vertical barrier | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Scenario D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| D1 | Along the realigned TCL down track | 7m vertical with 3.5m cantilevered arm noise barriers | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| D2 | Within the TCE station for TCL down track and part of the realigned TCL up track | 5m vertical barrier | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| S4.6.4 | N9 | Airborne rail noise commissioning test before the Project is in operation shall be conducted at the proposed monitoring locations. | To comply with the noise criteria of NCO | MTR Corporation | Proposed monitoring location | Prior to operational phase | <ul style="list-style-type: none"> • NCO • EIAO-TM | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| S4.6.4 | N10 | Airborne rail noise monitoring for the initial start-up of up to 3 months shall be conducted at the proposed monitoring locations. | To comply with the noise criteria of NCO | MTR Corporation | Proposed monitoring location | Operational phase | <ul style="list-style-type: none"> • NCO • EIAO-TM | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

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| S4.7.4 | N11 | Groundborne rail noise commissioning test prior to the operation of the Project shall be conducted at the proposed monitoring location. | To comply with the noise criteria of NCO | MTR Corporation | Proposed monitoring location | Prior to operational phase | <ul style="list-style-type: none"> • NCO • EIAO-TM |
| S4.8.4 | N12 | Fixed plant noise audit shall be conducted for each planned fixed noise source. | To ensure the compliance of predicted the maximum allowable Sound Power Level | Contractor/ MTR Corporation | Each planned fixed noise source | Prior to operational phase | <ul style="list-style-type: none"> • NCO • EIAO-TM |

Water Quality (Construction Phase)

| | | | | | | | |
|--------|----|--|--|------------|------------------------|--------------------|--|
| S5.7.1 | W1 | <p><u>General Construction Activities</u></p> <p>Best Management Practices (BMPs) should be implemented as far as practicable according to The Professional Persons Environmental Consultative Committee (ProPECC) Practice Note (PN) 1/94 “Construction Site Drainage”. The details of BMPs are presented as follows:</p> <ul style="list-style-type: none"> • All effluent discharged from the construction site should comply with the standards stipulated in the DSS-TM; • Discharge surface and road runoff from construction sites including barging point into storm drains via adequately designed sand/silt removal facilities such as sand traps, silt traps, and sedimentation tanks with sufficient retention time. Provide channels or earth bunds or sandbag barriers on-site during construction works to properly direct stormwater to such silt removal facilities. Provide perimeter channels on-site boundaries where necessary to intercept storm runoff from outside the site so that it will not wash across the site. Install catch pits and perimeter channels in advance of site formation works and earthworks; | To reduce water quality impact from construction site runoff and general construction activities | Contractor | All construction sites | Construction phase | <ul style="list-style-type: none"> • WPCO • ProPECC (PN1/94) • EIAO-TM • DSS-TM • Technical Circular No. 1/2017 • Practical Notes No. 1/2017 |
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| | | <ul style="list-style-type: none"> • Covered the temporarily exposed slope surfaces e.g. by a tarpaulin. Protect the temporary access roads by crushed stone or gravel, as excavation proceeds as far as practicable. Install intercepting channels (e.g. along the crest/edge of excavation) to prevent storm runoff from washing across exposed soil surfaces. Carried out adequate surface protection measures safely well before the arrival of a rainstorm; • Compact the final surfaces of earthworks properly and execute the subsequent permanent work or surface protection immediately after the final surfaces are formed to prevent erosion caused by rainstorms. Install appropriate drainage like intercepting channels where necessary; • If excavation of trenches in wet seasons is necessary, they should be dug and backfilled in short sections as far as practicable to minimize the ingress of rainwater into trenches. Discharge the rainwater pumped out from trenches or foundation excavations into storm drains via silt removal facilities; • Recondition and reuse the bentonite wherever practicable to minimise the disposal volume of used bentonite slurries. Provide temporary enclosed storage locations on-site for any unused bentonite that needs to be transported away after the related construction activities are completed. The process of handling and disposing of bentonite slurries should follow the requirements as stipulated in ProPECC PN 1/94; | | | | | |

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| | | <ul style="list-style-type: none"> Cover the open stockpiles of construction materials (e.g. aggregates, sand and fill material) on sites with tarpaulin or similar fabric during rainstorms; Cover and temporarily sealed manholes (including newly constructed ones) adequately so as to prevent silt, construction materials, or debris from getting into the drainage system, and to prevent storm runoff from getting into foul sewers. Avoid discharging surface runoff into foul sewers in order not to unduly overload the foul sewerage system; and Clean the construction sites on a regular basis (e.g. remove the rubbish and litter from the construction sites). | | | | | |
| S5.7.2 | W2 | <p><u>Mitigation measures/ enhancement measures for TCW Area</u></p> <ul style="list-style-type: none"> Install a barrier such as sheet pile/hoarding with concrete footing along the western boundary of the construction site/works areas. This barrier shall be able to contain the surface run-off from releasing to the estuary in an uncontrolled manner during heavy rainfall; Contractor should apply for a discharge licence under the WPCO and conduct necessary water quality measurements at the discharge location(s) to demonstrate compliance with the licence conditions; and Maintain the silt removal facilities, channels, and manholes and remove the deposited silt and grit regularly, at the onset of and after each rainstorm to prevent local flooding if necessary. | To avoid the untreated surface run-off being accidentally discharged into the adjoining water bodies. | Contractor | Construction sites in TCW area | Construction phase | <ul style="list-style-type: none"> WPCO ProPECC (PN1/94) EIAO-TM DSS-TM Technical Circular No. 1/2017 Practical Notes No. 1/2017 |

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| S5.7.3 | W3 | <u>Mitigation measures for Barging Point</u> <ul style="list-style-type: none"> Maintain adequate clearance between vessels and the seabed in all tide conditions to minimise undue turbidity generated by turbulence from vessel movement or propeller wash; and Control the loading of barges and hoppers to prevent the splashing of material into the surrounding water. Barges or hoppers should not be filled to a level that will cause the overflow of materials or polluted water during loading or transportation. | To minimize the water quality impact due to the transportation of spoil using the barging point | Contractor | Barging Point | Construction phase | <ul style="list-style-type: none"> ProPECC (PN1/94) EIAO-TM DSS-TM |
| S5.7.4 | W4 | <u>Wastewater Discharge from Tunnelling and Open Cut Excavation</u> <ul style="list-style-type: none"> Treat the wastewater, especially with a high level of suspended solids, by settling tanks with sufficient retention time before discharging to the stormwater drain; Remove oil, lubricants, and grease from wastewater by oil interceptors whenever necessary; and Apply for a discharge licence under the Water Pollution Control Ordinance (WPCO) for discharging to the stormwater drain. | To minimize the water quality impact from the wastewater generated from Tunnelling and Open Cut Excavation | Contractor | Tunnelling works and Open Cut excavation | Construction phase | <ul style="list-style-type: none"> WPCO ProPECC (PN1/94) EIAO-TM DSS-TM |
| 5.7.5 | W5 | <u>Alteration of Groundwater Level</u> <ul style="list-style-type: none"> Install groundwater monitoring wells as a precautionary measure in the area closed to TBM and other potential underground works; and An action plan is recommended to guide the work arrangement in case of appearing change of groundwater level. | To prevent impacts on groundwater level. | Contractor | Tunnelling works | Construction phase | <ul style="list-style-type: none"> WPCO ProPECC (PN1/94) EIAO-TM DSS-TM |

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| S5.7.6 | W6 | <u>Sewage Effluent from Construction Workforce</u> <ul style="list-style-type: none"> • No discharge of sewage to the stormwater system and marine water will be allowed; • Establish adequate and sufficient portable chemical toilets in the works areas to handle sewage from the construction workforce; • Employ a registered waste collector to clean and maintain the chemical toilets on a regular basis; and • Notices should be posted at conspicuous locations to remind the workers not to discharge any sewage or wastewater into the surrounding environment. | To reduce water quality impact from wastewater from construction workforce. | Contractor | All construction sites | Construction phase | <ul style="list-style-type: none"> • WPCO • ProPECC (PN1/94) • EIAO-TM • DSS-TM |
| S5.7.7 | W7 | <u>Accidental Spillage</u> <ul style="list-style-type: none"> • Contractor must register as a chemical waste producer if chemical wastes would be produced from the construction activities; • Any chemical waste generated shall be managed in accordance with the Waste Disposal (Chemical Waste) (General) Regulation; • The Contractor should develop management procedures for chemicals used and prepare an emergency spillage handling procedure to deal with chemical spillage in case of an accident occurs; • Any services and maintenance facilities should be located on hard standings within a bunded area, and sumps and oil interceptors should be provided. Maintenance of vehicles and equipment involving activities with the potential for leakage and spillage should only be undertaken within the areas appropriately equipped to control these discharges; | To minimise water quality impact from accidental spillage of chemicals | Contractor | All construction sites | Construction phase | <ul style="list-style-type: none"> • WPCO • ProPECC (PN1/94) • EIAO-TM • DSS-TM • WDO |

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| | | <ul style="list-style-type: none"> • The service and maintenance as well as any chemical storage area would be avoided to position near the watercourse as a safe guard; • The Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes published under the Waste Disposal Ordinance shall be followed to deal with chemical wastes; • Suitable containers should be used to hold the chemical wastes to avoid leakage or spillage during storage, handling, and transport; • Chemical waste containers should be suitably labelled, to notify and warn the personnel who are handling the wastes, to avoid accidents; • Storage area should be selected at a safe location on-site and adequate space should be allocated to the storage area; • Sufficient ground investigation and soil testing should be carried out; • All charted drill holes should be checked by engineer to ensure proper seal up prior to the TBM passing; and • The Contractor should devise a contingency plan for any accidental spillage and heavy rainfall event. | | | | | |
| Water Quality (Operational Phase) | | | | | | | |
| S5.7.8 | W8 | <p>The following mitigation measures for stormwater surface runoff will be implemented.</p> <ul style="list-style-type: none"> • Stormwater surface runoff from the realigned open tracks in TCE area would be connected to the nearby existing track side drainage system; | To minimize the water quality impact from stormwater surface runoff | MTR Corporation | Whole alignment | Operational Phase | <ul style="list-style-type: none"> • WPCO |

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| | | <ul style="list-style-type: none"> The drainage system for other sources of the surface runoff from the Project including TCE Station, entrances and vent shaft structures of TCW Station, EAP/EEP to the west of Shun Tung Road would be provided with silt trap to remove debris and refuse where appropriate; Relevant maintenance staff should conduct necessary inspection and maintenance to maintain the conditions of silt trap; and Stormwater surface runoff generated should be discharged to the nearby public drainage system. | | | | | |
| S5.7.9 | W9 | <p>The following mitigation measures for sewage and other wastewater will be implemented.</p> <ul style="list-style-type: none"> Standard oil/grit interceptors/chambers should be provided where necessary before discharge to public sewers; A discharge licence for the discharge of commercial and industrial effluent shall be applied; The bleed off water from the freshwater cooling chiller should be recycled for flushing use as far as practical, with any excess bleed off be discharged into the sewerage system; and The practices outlined in ProPECC PN 5/93 for handling, treatment and disposal of effluent should be adopted. | To minimize the water quality impact from sewage and other wastewater | MTR Corporation | Whole alignment | Operational Phase | <ul style="list-style-type: none"> WPCO ProPECC PN 5/93 DSS-TM |

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| <i>Waste Management (Construction Phase)</i> | | | | | | | |
| S6.2.3.2 | WM1 | <p><u>Good Site Practices</u></p> <p>The following good site practices are recommended to reduce waste generation during construction:</p> <ul style="list-style-type: none"> • Nomination of an approved personnel, such as a site manager, to be responsible for the implementation of good site practices, arrangements for collection and effective disposal to an appropriate facility, of all wastes generated at the site; • Training of site personnel in site cleanliness, appropriate waste management procedures and concepts of waste reduction, reuse and recycling; • Provision of sufficient waste disposal points and regular collection for disposal; • Appropriate measures to minimize windblown litter and dust during transportation of waste by either covering trucks or by transporting wastes in enclosed containers; • Regular cleaning and maintenance programme for drainage systems, sumps and oil interceptors; • Provision of wheel washing facilities at the site exit before the trucks leave the works areas; and • The Contractor should prepare a Waste Management Plan (WMP) as part of the Environmental Management Plan (EMP) in accordance with the ETWB TCW No. 19/2005. The WMP should be submitted to the Engineer for approval. Mitigation measures proposed in the EIA Report and the EM&A Manual should be adopted. | Ensure proper waste management system throughout the construction | Contractor | All construction sites | Construction phase | <ul style="list-style-type: none"> • WDO • ETWB TC(W) 19/2005 |

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| S6.2.3.3 | WM2 | <p><u>Waste Reduction Measures</u></p> <p>The following recommendations are proposed to achieve reduction of waste:</p> <ul style="list-style-type: none"> • Segregate and store different types of waste in different containers, skip or stockpiles to enhance reuse or recycling of materials and their proper disposal; • Proper storage and good site practices to minimize the potential for damage and contamination of construction materials; • Plan and stock construction materials carefully to minimize amount of waste generated and avoid unnecessary generation of waste; • Sort out demolition debris and excavated materials from demolition works to recover reusable/ recyclable portions (i.e. soil, broken concrete, metal etc.); and • Provide training to workers on the importance of appropriate waste management procedures, including waste reduction, reuse and recycling. | Reduce waste generation | Contractor | All construction sites | Construction phase | <ul style="list-style-type: none"> • WDO |
| S6.2.3.4 – S6.2.3.8 | WM3 | <p><u>Storage, Collection and Transportation of Waste</u></p> <p>The following recommendation should be implemented to minimise the impacts from storage, collection and transportation of waste:</p> <ul style="list-style-type: none"> • Non-inert C&D materials such as top soil should be handled and stored well to ensure secure containment of the materials; • Stockpiling area should be provided with covers and water spraying system to prevent materials from wind-blown or being washed away; and | Minimise impact to the environment due to storage, collection and transport of waste | Contractor | All construction sites | Construction phase | <ul style="list-style-type: none"> • WDO • Land (Miscellaneous Provisions) Ordinance • ETWB TCW No. 19/2005 |

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| | | <ul style="list-style-type: none"> • Different locations should be designated to stockpile each material to enhance reuse. • Remove waste in timely manner; • Employ the trucks with cover or enclosed containers for waste transportation; • Obtain relevant waste disposal permits from the appropriate authorities; • Disposal of waste should be done at licensed waste disposal facilities; • All dump trucks engaged on site for delivery of inert C&D material from the site to PFRFs should be equipped with GPS or equivalent system for tracking and monitoring of their travel routings and parking locations by the Contractor. The data collected by GPS or equivalent system should be recorded properly for checking and analysis by ET and IEC; • A Construction and Demolition Material Management Plan (C&DMMP) should be prepared in accordance with Section 4.1.3 “Construction and Demolition Materials” of the Project Administration Handbook for Civil Engineering Works and will be submitted together with the EIA Report to Public Fill Committee (PFC) for approval; • Carry out on-site sorting for C&D materials; • Make provisions in the Contract documents to allow and promote the use of recycled aggregates where appropriate; and • Implement a trip-ticket system for each works contract in accordance with DEVB TCW No. 06/2010. | | | | | |

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| S6.2.3.10 – S62.3.12 | WM4 | <u>On-site Sorting of C&D Materials</u> <ul style="list-style-type: none"> • Storage areas should be provided in the site for temporary storage of inert C&D materials during construction phase. • All C&D materials arising from the construction would be sorted on-site to recover the inert C&D materials and reusable and recyclable materials prior to disposal off-site as far as practicable. • Non-inert portion of C&D materials should be reused whenever possible and be disposal of at landfills as a last resort. • The Contractor should devise a system to work for on-site sorting of C&D materials and promptly remove all sorted and processed material arising from the construction activities to minimize temporary stockpiling on-site. The system should include the identification of the source of generation, estimated quantity, arrangement for on-site sorting and/ or collection, temporary storage areas, and frequency of collection by recycling contractors or frequency of removal off-site. | Minimize waste impacts from C&D materials handling | Contractor | All construction sites | Construction phase | <ul style="list-style-type: none"> • WDO • ETWB TCW No. 19/2005 • Land (Miscellaneous Provisions) Ordinance |
| S6.2.3.13 | WM5 | <u>Reuse of C&D Materials</u> <ul style="list-style-type: none"> • Reuse suitable inert C&D materials on-site as far as practicable; • Reuse suitable excavated rock by reworking at approved quarries (e.g. crushed as aggregates); • Sorting of demolition debris and excavated materials from demolition works to recover reusable/ recyclable portions (e.g. soil, broken concrete, metal); and | Minimize waste impacts from C&D materials handling | Contractor | All construction sites | Construction phase | <ul style="list-style-type: none"> • WDO • ETWB TCW No. 19/2005 • Land (Miscellaneous Provisions) Ordinance |

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| | | <ul style="list-style-type: none"> Protect recyclable material to keep it in usable condition. | | | | | |
| S6.2.3.15 | WM6 | <p><u>Specification of Inert C&D Materials to be Delivered Off-site</u></p> <p>In case there are surplus inert C&D materials generated in the Project and are required to delivered to the Public Fill Reception Facilities (PFRFs), the inert C&D materials should fulfil the following requirements:</p> <ul style="list-style-type: none"> Reclaimed asphalt pavement will not be mixed with other materials when delivered to the public fill reception facilities; Moisture content of inert C&D materials will be lowered to 25% max. when delivered to the public fill reception facilities; Inert C&D materials delivered to the public fill reception facilities should be a size less than 250mm; and Inert construction waste shall not be in liquid form such that it can be contained and delivered by dump truck as far as possible. Inert C&D materials in liquid form shall be solidified before delivering to the public fill reception facilities. | Reduce waste generation | Contractor | All construction sites | Construction phase | <ul style="list-style-type: none"> WDO ETWB TCW No. 19/2005 Land (Miscellaneous Provisions) Ordinance |
| S6.2.3.17 | WM7 | <p><u>Use of Standard Formwork and Planning of Construction Materials purchasing</u></p> <ul style="list-style-type: none"> Standard formwork should also be used as far as practicable to minimise the arising of non-inert C&D materials; Use of more durable formwork (e.g. metal hoarding) or plastic facing should be encouraged in order to enhance the possibility of recycling; and | Reduce waste generation | Contractor | All construction sites | Construction phase | <ul style="list-style-type: none"> N.A. |

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| | | <ul style="list-style-type: none"> Purchasing of construction materials should be carefully planned in order to avoid over ordering and wastage. | | | | | |
| S6.2.3.18 – S6.2.3.20 | WM8 | <p><u>Land-based Marine Sediment</u></p> <ul style="list-style-type: none"> Excavated land-based marine sediment should be reused as far as possible within the Project Site before considering disposal. Marine disposal option for the land-based marine sediment should only be considered as the last resort upon exhaustion of reuse options. All construction plant and equipment shall be designed and maintained to minimise the risk of sediments being released into the water column or deposited in the locations other than designated location. All vessels should be sized so that adequate clearance is maintained between vessels and the seabed in all tide conditions, to minimise that undue turbidity is not generated by turbulence from vessel movement or propeller wash. Adequate freeboard shall be maintained on barges to ensure that decks are not washed by wave action. The Contractor shall monitor all vessels transporting the excavated sediment. The Contractor shall keep and produce logs and other records to demonstrate compliance and that journeys are consistent with designated locations and copies of such records shall be submitted to the Engineers. | Handling excavated sediment | Contractor | All construction sites where applicable | Construction phase | <ul style="list-style-type: none"> ETWB-TCW 34/2002 DASO |

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| | | <ul style="list-style-type: none"> • The Contractor shall comply with the conditions in the dumping permit issued under the Dumping at Sea Ordinance (DASO). • All bottom dumping vessels (hopper barges) shall be fitted with tight fittings seals to their bottom openings to prevent leakage of material. • The excavated sediment shall be placed into the disposal pit by bottom dumping. • Discharge shall be undertaken rapidly and the hoppers shall be closed immediately. Sediment adhering to the sides of the hopper shall not be washed out of the hopper and the hopper shall remain closed until the barge returns to the disposal site. | | | | | |
| S6.2.3.21 | WM9 | <p>If mixing of land-based marine sediment with cement is to be used for backfilling on-site, the following mitigation measures should be followed.</p> <ul style="list-style-type: none"> • The loading, unloading, handling, transfer or storage of bulk cement should be carried out in an enclosed system as far as practicable; • Mixing process and other associated material handling activities should be properly scheduled to minimise potential noise impact and dust emission; and • The mixing facilities should be sited as far apart as practicable from the nearby NSRs and to be sited under covers to minimise dust nuisance to the nearby receivers. | Handling excavated sediment | Contractor | All construction sites where applicable | Construction phase | <ul style="list-style-type: none"> • ETWB-TCW 34/2002 • DASO |

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| S6.2.3.22 – S6.2.3.23 | WM10 | <u>Chemical Waste</u> <ul style="list-style-type: none"> • Reduce the generation quantities or select a chemical type of less impact on environment, health and safety as far as possible; and • If chemical wastes are produced at the construction site, the Contractors should register with EPD as chemical waste producer. Chemical wastes should be stored in appropriate containers and collected by a licensed chemical waste collector. Chemical wastes (e.g. spent lubricant oil) should be recycled at an appropriate facility as far as possible, while the chemical waste that cannot be recycled should be disposed of at either the Chemical Waste Treatment Centre, or another licensed facility, in accordance with the Waste Disposal (Chemical Waste) (General) Regulation. | Control the chemical waste and ensure proper storage, handling and disposal | Contractor | All construction sites | Construction phase | <ul style="list-style-type: none"> • Waste Disposal (Chemical Waste) (General) Regulation • Code of Practice on the Packaging, Labelling and Storage of Chemical Waste |
| S6.2.3.24 – S6.2.3.25 | WM11 | <u>General Refuse</u> <ul style="list-style-type: none"> • General refuse should be stored in enclosed bins separately from construction and chemical wastes. • Recycling bins should also be placed to encourage recycling; • Preferably enclosed and covered areas should be provided for general refuse collection and routine cleaning for these areas should also be implemented to keep areas clean; • A reputable waste collector should be employed to remove general refuse on a daily basis; • Arrangements should be made with the recycling companies to collect the recycle waste as required; | Minimise production of the general refuse and avoid odour, pest and litter impacts | Contractor | All construction sites | Construction phase | <ul style="list-style-type: none"> • WDO |

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| | | <ul style="list-style-type: none"> The Contractor should implement an education programme for workers relating to avoiding, reducing, reusing and recycling general waste; and Participation in a local collection scheme should be considered by the Contractor to facilitate waste reduction. | | | | | |
| Waste Management (Operational Phase) | | | | | | | |
| S6.3.3.1 – S6.3.3.2 | WM12 | <u>Municipal Solid Waste</u> <ul style="list-style-type: none"> Recycling bins should be clearly labelled at designated locations; Scrap materials from railway maintenance activities should be sorted out and recovered for their resalable value as far as possible; General refuse should be separated from chemical waste by providing separated bins for storage; and A reputable waste collector should be employed to remove municipal solid waste regularly. | Remove municipal solid waste generated | MTR Corporation | EAP/ EEP, TCE and TCW Stations as well as associated facilities | Operational phase | <ul style="list-style-type: none"> WDO |
| S6.3.3.3 – S6.3.3.7 | WM13 | <u>Chemical Waste</u> <ul style="list-style-type: none"> Handling of chemical waste shall follow the requirements given in the Code of Practice on the Packaging, Labelling and Storage of Chemical Waste; A trip-ticket system should be operated; Chemical waste should be collected and disposed of at appropriate facility like CWTC by licensed collectors; | Minimize production of chemical waste | MTR Corporation | EAP/ EEP, TCE and TCW Stations as well as associated facilities | Operational phase | <ul style="list-style-type: none"> WDO Code of Practice on the Packaging, Labelling and Storage of Chemical Waste |

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| | | <ul style="list-style-type: none"> • Good quality containers compatible with the chemical wastes should be used and incompatible chemicals should be stored separately; and • Appropriate labels should be secure attached on each chemical waste container. | | | | | |
| Ecology (Construction Phase) | | | | | | | |
| S8.9.1 | E1 | Avoidance of marine works | To avoid any impacts on the important marine/ intertidal ecological resources | Contractor | All construction sites | Construction phase | • EIA |
| S8.9.2 | E2 | Avoidance of Tung Chung River and its estuary, and Tai Ho Wan | To avoid any impacts on the ecological important area | Contractor | All construction sites near Tung Chung River and Tai Ho Wan | Construction phase | • EIA |
| S8.9.3 | E3 | Avoidance of works within intertidal zone of Tung Chung Bay | To avoid any impacts on the important intertidal ecological resources | Contractor | All construction sites near Tung Chung Bay | Construction phase | • EIA |
| S8.9.4 | E4 | Avoidance of country parks, SSSI, CA and CPA | To avoid any ecological impacts | Contractor | All construction sites | Construction phase | • EIA |
| S8.9.5 | E5 | Avoidance of mature woodland | To avoid impact on mature woodland | Contractor | All construction sites | Construction phase | • EIA |

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| S8.9.6 | E6 | Avoidance of re-diversion of Wong Lung Hang Nullah | To avoid any direct impacts on the Wong Lung Hang Estuary area | Contractor | All construction sites | Construction phase | <ul style="list-style-type: none"> EIA |
| S8.9.7 | E7 | A protection zone should be set up for one individual of <i>Aquilaria sinensis</i> and <i>Canthium Dicoocum</i> on the plantation slope along Shun Tung Road | To protect the individuals of flora species | Contractor | Construction sites at the EAP/ EEP | Construction phase | <ul style="list-style-type: none"> EIA |
| S8.9.11 | E8 | <p><u>Minimisation of Human Disturbance during Construction</u></p> <ul style="list-style-type: none"> Install site hoarding of appropriate height along site boundaries; Construction activities and material storage should be strictly confined within the construction sites; and For TCW section, dedicated access to the nearby ecologically sensitive areas outside of the construction sites, works areas, and works sites is not allowed due to the proximity to the Wong Lung Hang estuary and Tung Chung Bay. | To minimise disturbance due to human activities during construction to the nearby areas. | Contractor | All construction sites | Construction phase | <ul style="list-style-type: none"> EIA |
| <i>Landscape and Visual (Construction Phase)</i> | | | | | | | |
| S10.8.2 | LV1 | <p><u>Tree Preservation</u></p> <p>Existing trees to be retained within the Project Site shall be protected carefully during construction.</p> | Protect and preserve tree | Contractor | All construction sites | Construction Phase | <ul style="list-style-type: none"> EIAO-TM DEVB TCW No. 4/2020 |
| S10.8.2 | LV2 | <p><u>Tree Transplanting</u></p> <p>Trees unavoidably affected by the Project works shall be transplanted where practical. Approximately 170 nos. of trees are proposed to be transplanted at Shun Tung Road and Yu Tung Road.</p> | Transplant Trees where suitable for transplantation | Contractor/ MTR Corporation | All construction sites | Construction Phase | <ul style="list-style-type: none"> EIAO-TM DEVB TCW No. 4/2020 |

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| S10.8.2 | LV3 | <u>Landscape Reinstatement</u> All hard and soft landscape areas disturbed temporarily during construction shall be reinstated on like-to-like basis as far as possible, to the satisfaction of the relevant Government Departments. | Reinstate the landscape environment | Contractor | All construction sites | Construction Phase | <ul style="list-style-type: none"> EIAO-TM |
| S10.8.2 | LV4 | <u>Lighting Control</u> All security floodlights for construction sites should be carefully controlled to minimize light pollution and night-time glare to nearby users. | Minimise impact of nighttime lighting and glare | Contractor | All construction sites | Construction phase | <ul style="list-style-type: none"> Guidelines on Industry Best Practices for External Lighting Installations |
| S10.8.2 | LV5 | <u>Erection of Screen Hoarding</u> Construction site hoarding should be erected around the work sites and work areas to screen pedestrian level views into the construction area from visual sensitive receivers. Hoarding design shall be compatible with the surrounding context as far as practicable. | Screen undesirable views of the construction sites | Contractor | All construction sites | Construction phase | |
| S10.8.2 | LV6 | <u>Optimization of Construction Areas</u> Control of construction areas shall be enforced, where possible, to ensure that the landscape and visual impacts arising from the construction activities are minimised. It includes optimising the extent of working areas and temporary works areas, management on storing and using the construction equipment and materials, and consideration of detailed schedules to shorten the construction period. | Minimise impacts from construction activities on adjacent landscape and visual sensitive receivers. | Contractor | All construction sites | Construction phase | |

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| <i>Landscape and Visual (Operational Phase)</i> | | | | | | | |
| S10.8.2 | LV7 | <p><u>Compensatory Tree Planting</u></p> <p>Approximately 2,100 no. of trees are proposed to be felled and compensated. The Project Proponent should implement the compensatory planting as proposed in the TPRP to be submitted to relevant government departments for approval in accordance with DEVB TCW No. 4/2020 to compensate for the trees to be felled. A number of possible compensatory tree planting locations have been identified as summarised below. The Project Proponent will actively liaise with all the relevant departments throughout the TPRP process.</p> <ul style="list-style-type: none"> • Tung Chung Area 113; • TCE Station; • Tung Chung Crescent; • Shun Tung Road; • TCW Station; • Yu Tung Road; • Hillside area near Tung Chung Road; • Planned residential and commercial development atop Siu Ho Wan Depot; and • Other areas to be identified. | Compensate for trees due to the Project | Contractor/ MTR Corporation | Onsite where possible. Otherwise consider off-site locations | Detailed design and operational phase | <ul style="list-style-type: none"> • EIAO-TM • DEVB TCW No. 4/2020 |

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|---------------------------|--------------------------------|--|---|--------------------------------|---|---------------------------------------|--|-----|------------------------|-----|--|-----------------------------|---|---------------------------------------|--|
| S10.8.2 | LV8 | <p><u>Optimise Greening Provision on Structure</u></p> <p>The following greening provision should be implemented and these would be further revisited and refined during the subsequent design phase and throughout the construction period.</p> <table border="1" data-bbox="409 531 1039 794"> <thead> <tr> <th data-bbox="409 531 723 596">Greening Provision</th> <th data-bbox="723 531 1039 596">Area (m²), approx</th> </tr> </thead> <tbody> <tr> <td data-bbox="409 596 723 662">Green roof at TCE Station</td> <td data-bbox="723 596 1039 662">3,200</td> </tr> <tr> <td data-bbox="409 662 723 727">Green roof at TCW Station</td> <td data-bbox="723 662 1039 727">900</td> </tr> <tr> <td data-bbox="409 727 723 794">Green roof at EAP/ EEP</td> <td data-bbox="723 727 1039 794">600</td> </tr> </tbody> </table> | Greening Provision | Area (m ²), approx | Green roof at TCE Station | 3,200 | Green roof at TCW Station | 900 | Green roof at EAP/ EEP | 600 | Mitigate visual impact of the large roof area of above-ground structures on the visual sensitive receivers at high level | Contractor/ MTR Corporation | All structures as feasible, final location to be confirmed at detailed design phase | Detailed design and operational phase | |
| Greening Provision | Area (m ²), approx | | | | | | | | | | | | | | |
| Green roof at TCE Station | 3,200 | | | | | | | | | | | | | | |
| Green roof at TCW Station | 900 | | | | | | | | | | | | | | |
| Green roof at EAP/ EEP | 600 | | | | | | | | | | | | | | |
| S10.8.2 | LV9 | <p><u>Landscape Integration and Screen Planting</u></p> <p>Plant tree screen/ buffer trees and shrubs to screen proposed stations and its vent shaft structures where appropriate. Approx. 8 nos. of trees are proposed as a buffer planting besides EAP/ EEP along Shun Tung Road.</p> | Improve compatibility with the surrounding environment | Contractor/ MTR Corporation | Selected sites as feasible, final location to be confirmed at detailed design phase | Detailed design and operational phase | | | | | | | | | |

**Environmental Mitigation Implementation Schedule
Tung Chung Line Extension**

| EIA Ref. | EM&A Log Ref | Recommended Mitigation Measures | Objectives of the Recommended Measures & Main Concerns to address | Implementation Agent | Location / Timing | Implementation Phase | Requirements and / or standards to be achieved |
|----------|--------------|---|---|-----------------------------|--|---------------------------------------|--|
| S10.8.2 | LV10 | <p><u>Architectural Aesthetic Design of Built Structures</u></p> <p>Building massing is compatible with its surroundings.</p> <ul style="list-style-type: none"> The architectural character of the proposed structures in terms of form, material and surface detailing shall be complementary to the planned sub-urban character of TCE/natural-rural setting of TCW. The proposed vent shaft structures shall adopt a mild and subdued design to minimize potential visual impact to nearby residents/VSRs. The façade of the proposed pedestrian links/footbridges and TCE station shall adopt aesthetic pleasing design and enhance arrival/pedestrian experience, especially to the VSR at major open space (i.e. the planned metro plaza at Area 113). For the above-ground structure of the station entrances in TCW Station, the architectural design has incorporated transparent glass panels which would alleviate the bulk of the structure and allow natural light to penetrate into the station entrances. This would help to reduce the visual impacts of the station entrances. For the vent shaft structures in TCW, the building height would be kept to minimum. Given the natural environmental in the backdrop, the selection of façade materials would be compatible with the surrounding natural elements. These would help to reduce the visual impacts of the vent shaft structures. | Improve visual amenity of the built structure | Contractor/ MTR Corporation | Selected structures as feasible, final location to be confirmed at detailed design phase | Detailed design and operational phase | |

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| | | <ul style="list-style-type: none"> The TCE Station would be an above-ground structure of approximate height of about 20m along with the at-grade tracks of TCL. The concourse slab level facing the hillside and the skylight of the roof at the TCE Station would adopt transparent glass panels. In order to integrate skylights into the roof, the air-conditioning duct work would be relocated below the concourse slab level. These design features would allow natural light to penetrate into the concourse and help to reduce the associated visual impacts. There are 2 pedestrian links connecting the TCE Station and Area 113 of the planned TCNTE (East) development. Each of these 2 pedestrian links has an approximately length of about 60m and a height of approximately 15m. In order to mitigate the visual impacts, glass panels will be adopted along the walls of these 2 pedestrian links. Similar to the case for station entrances in TCW Station, this design feature will alleviate the bulk of the structure and allow natural light to penetrate into the pedestrian links and would help to reduce the associated visual impacts. | | | | | |
| S10.8.2 | LV11 | <p><u>Implement Aesthetic Design on Noise Barrier</u></p> <p>The visual impact of noise mitigation measures will be mitigated by appropriate detailed design to reduce visual bulkiness and incorporate aesthetically pleasing surface treatments to promote visual amenity, including a suitable combination of transparent and sound absorbent materials, appropriate colour selection of panels and supporting structures, as well as the design of supporting structures to incorporate a high level of quality and aesthetics. A combination of transparent panels and solid panels would</p> | Improve visual amenity of the built structure | Contractor/ MTR Corporation | Selected structures as feasible | Detailed design and operational phase | |

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| | | lighten the visual impact, and at the same time maintain the attractiveness by using colourful panels | | | | | |
| <i>Cultural Heritage (Construction Phase)</i> | | | | | | | |
| S11.5.5 | CH1 | <u>Terrestrial Archaeology</u> Conduct field scan, 6 auger tests and 2 test pit excavations within the area of archaeological interest by a qualified archaeologist who obtains a licence under the Antiquities and Monuments Ordinance (Cap. 53). Locations and scope should be agreed with AMO prior to implementation. The exact locations of the auger tests and test pits would be subject to site circumstances and constraints. Subject to the findings of the further archaeological testing, options for mitigation measures such as in-situ preservation, relocation and preservation by record etc would be fully investigated and agreed with AMO. | To investigate the archaeological potential within unexplored areas of archaeological interest | Qualified archaeologist engaged by Contractor/ MTR Corporation | Northern side of TCW Station | Prior to construction phase | <ul style="list-style-type: none"> Antiquities and Monuments Ordinance (Cap. 53) Guidelines for Cultural Heritage Impact Assessment EIAO-TM |
| S11.5.5 | CH2 | <u>Terrestrial Archaeology</u> AMO should be informed immediately in case of discovery of antiquities or supposed antiquities in the course of the project works in accordance with the Antiquities and Monuments Ordinance (Cap. 53), so that appropriate mitigation measures, if needed, can be timely formulated and implemented in agreement with AMO. | To timely formulate and implement appropriate mitigation measures for protection of archaeological remains if needed within all construction sites | Contractor/ MTR Corporation | All construction sites | During construction phase | <ul style="list-style-type: none"> Antiquities and Monuments Ordinance (Cap. 53) |
| <i>Hazard to Life (Construction Phase)</i> | | | | | | | |

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| S12.3.2.1 | H1 | <u>Design Measures</u> <ul style="list-style-type: none"> • Implement emergency plan for efficient excavation including good practice; • Adopt site-sensitised bulk emulsion explosives for blasting; • No overnight storage of explosives; • Provide impermeable blast covers for the TCW Station and EAP/ EEP; • Prior to blasting, all the construction workforce for EAP/EEP and TCW station shall be evacuated and all the impermeable blast covers shall be closed; and • Limit to one blast per day for each blasting location (i.e. total of two blasts each day for the entire project). | To ensure the safe use of explosives | Contractor | EAP/ EEP and TCW Station | Construction phase | <ul style="list-style-type: none"> • EIAO-TM • Project Administration Handbook for Civil Engineering Works |
| S12.3.2.2 | H2 | <u>Good Site Practices</u> <ul style="list-style-type: none"> • Temporary mitigation measures such as blast doors or heavy duty blast curtains should be installed at the access adits, shafts/ portals and at suitable locations underground to prevent flyrock and control the air overpressure;; • Blasting at different locations will be carried out for this project. Good communication and control will need to be adopted in ensuring that the works are carried out safely; • A Chief Shotfirer and a Blasting Engineer shall be employed in addition to the normal blasting personnel to ensure that the works are coordinated | | | | | |

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| | | <p>between blasting areas and between adjacent contracts;</p> <ul style="list-style-type: none"> • Shotfirer to be provided with a lightning detector, and appropriate control measures should be in place; • Provide full-time supervision and blast checking by Blast Competent Supervisors (BCS) as mentioned in Project Administration Handbook for Civil Engineering Works; • Checking (including both document and site checks) for each blast including the installation of protective, precautionary, preventive measures, comply with the Blasting Permit requirements; • Inspecting the condition of all sensitive receivers before and after each blast; • Inspecting the construction of preventive works, if required, for the sensitive receivers; • Monitoring the site operations and working methods to ensure that they meet the safety requirements set out in the Blasting Permit; • Inspect consequence-to-life category 1 and 2 slopes that are subjected to significant blasting vibration before and after each blast; • Limit blast charge weight based on the allowable Peak Particle Velocity (PPV) for the controlling sensitive receivers surrounding the site; • Monitor regularly the condition of all sensitive receivers and carry out inspections and reviews before and after each blast; | | | | | |

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| | | <ul style="list-style-type: none"> Resolve any stability concerns observed at the slopes (e.g. persistent adverse discontinuity or other adverse geology, or loose boulders or other objects on the slope that could become unstable) before blasting; Ensure that any blasting carried out will not adversely affect services, slopes, retaining walls, buildings and structures through ground vibrations or other effects; and Ensure that adequate and necessary preventive, protective and precautionary measures are provided to prevent the works from causing injury to workers and the public, significant disruption to traffic, undue vibration and movement to existing structures and services, or undue nuisance to the public. | | | | | |
| EM&A Project | | | | | | | |
| S13.3 | EM1 | An Independent Environmental Checker needs to be employed as per the EM&A Manual. | Control EM&A performance | MTR Corporation | All construction sites | Construction Phase | <ul style="list-style-type: none"> EIAO Guidance Note No.4/2010 EIAO-TM |
| S13.3-13.5 | EM2 | <p>1) An Environmental Team needs to be employed as per the EM&A Manual.</p> <p>2) 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.</p> | Perform environmental monitoring and auditing | Contractor/ MTR Corporation | All construction sites | Construction Phase | <ul style="list-style-type: none"> EIAO Guidance Note No.4/2010 EIAO-TM |