Environmental Mitigation Implementation Schedule –
Contract No. HY/2014/09 (Ho Man Tin Access Shaft)

| EIA Ref. | EM&A Log Ref. | Recommended Mitigation Measures | Objectives of the Recommended Measures & Main Concerns to address | Implementation Agent | Location / Timing | Implementation Stage | Requirements and/ or standards to be achieved |
|---|---|---|---|---|---|---|---|
| Construction Dust Impact | | | | | | | |
| S4.3.10 | D1 | The contractor shall follow the procedures and requirements given in the Air Pollution Control (Construction Dust) Regulation | Minimize dust impact at the nearby sensitive receivers | Contractor | All construction sites | Construction stage | • APCO<br>• To control the dust impact To meet HKAQO and TM-EIA criteria |
| S4.3.10 | D2 | • Mitigation measures in form of regular watering under a good site practice should be adopted. Watering once per hour on exposed worksites and haul road should be conducted to achieve dust removal efficiencies of 91.7%. While the above watering frequencies are to be followed, the extent of watering may vary depending on actual site conditions but should be sufficient to maintain an equivalent intensity of no less than 1.3 L/$m^2$ to achieve the dust removal efficiency. | Minimize dust impact at the nearby sensitive receivers | Contractor | All construction sites | Construction stage | • APCO<br>• To control the dust impact To meet HKAQO and TM-EIA criteria |

Environmental Mitigation Implementation Schedule –
Contract No. HY/2014/09 (Ho Man Tin Access Shaft)

| EIA Ref. | EM&A Log Ref. | Recommended Mitigation Measures | Objectives of the Recommended Measures & Main Concerns to address | Implementation Agent | Location / Timing | Implementation Stage | Requirements and/ or standards to be achieved |
|---|---|---|---|---|---|---|---|
| S4.3.10 | D3 | •Proper watering at exposed spoil should be undertaken throughout the construction phase;<br>•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;<br>•Any dusty materials remaining after a stockpile is removed should be wetted with water and cleared from the surface of roads;<br>•A stockpile of dusty material should not be extended beyond the pedestrian barriers, fencing or traffic cones;<br>•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.<br>•Where practicable, vehicle washing facilities with high pressure water jet should be provided at every discernible or | Minimize dust impact at the nearby sensitive receivers | Contractor | All construction sites | Construction stage | • APCO<br>• To control the dust impact To meet HKAQO and TM-EIA criteria |

Environmental Mitigation Implementation Schedule –
Contract No. HY/2014/09 (Ho Man Tin Access Shaft)

| EIA Ref. | EM&A Log Ref. | Recommended Mitigation Measures | Objectives of the Recommended Measures & Main Concerns to address | Implementation Agent | Location / Timing | Implementation Stage | Requirements and/ or standards to be achieved |
|---|---|---|---|---|---|---|---|
| | | 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;<br>•When there are open excavation and reinstatement works, hoarding of not less than 2.4m high should be provided and properly maintained 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;<br>•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;<br>•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 | | | | | |

Environmental Mitigation Implementation Schedule –
Contract No. HY/2014/09 (Ho Man Tin Access Shaft)

| EIA Ref. | EM&A Log Ref. | Recommended Mitigation Measures | Objectives of the Recommended Measures & Main Concerns to address | Implementation Agent | Location / Timing | Implementation Stage | Requirements and/ or standards to be achieved |
|---|---|---|---|---|---|---|---|
| | | continuously;<br>• 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;<br>• Any skip hoist for material transport should be totally enclosed by impervious sheeting;<br>• 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;<br>• 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<br>• Exposed earth should be properly treated by compaction, | | | | | |

Environmental Mitigation Implementation Schedule –
Contract No. HY/2014/09 (Ho Man Tin Access Shaft)

| EIA Ref. | EM&A Log Ref. | Recommended Mitigation Measures | Objectives of the Recommended Measures & Main Concerns to address | Implementation Agent | Location / Timing | Implementation Stage | Requirements and/ or standards to be achieved |
|---|---|---|---|---|---|---|---|
| | | turfing, hydroseeding, vegetation planting or sealing with latex, vinyl, bitumen, shotcrete or other suitable surface stabilizer within six months after the last construction activity on the construction site or part of the construction site where the exposed earth lies. | | | | | |
| S4.3.10 | D6 | Implement regular dust monitoring under EM&A programme during the construction stage. | Monitoring of dust impact | Contractor | Selected rep. dust monitoring station | Construction stage | • TM-EIA |
| Construction Noise (Airborne) | | | | | | | |
| S5.4.1 | N1 | Implement the following good site practices:<br>• Only well-maintained plant should be operated on-site and plant should be serviced regularly during the construction programme;<br>• Machines and plant (such as trucks, cranes) that may be in | Control construction airborne noise | Contractor | All construction sites | Construction stage | • Annex 5, TM-EIAO |

Environmental Mitigation Implementation Schedule –
Contract No. HY/2014/09 (Ho Man Tin Access Shaft)

| EIA Ref. | EM&A Log Ref. | Recommended Mitigation Measures | Objectives of the Recommended Measures & Main Concerns to address | Implementation Agent | Location / Timing | Implementation Stage | Requirements and/ or standards to be achieved |
|---|---|---|---|---|---|---|---|
| | | intermittent use should be shut down between work periods or should be throttled down to a minimum;<br>• Plant known to emit noise strongly in one direction, where possible, be orientated so that the noise is directed away from nearby NSRs;<br>• Silencers or mufflers on construction equipment should be properly fitted and maintained during the construction works;<br>• Mobile plant should be sited as far away from NSRs as possible and practicable;<br>• Material stockpiles, mobile container site office and other structures should be effectively utilized, where practicable, to screen noise from on-site construction activities. | | | | | |
| S5.4.1 | N2 | Install temporary hoarding located on the site boundaries between noisy construction activities and NSRs. The conditions of hoardings shall be properly maintained throughout the construction period. | Reduce the construction noise levels at low-level zone of NSRs through partial | Contractor | All construction sites | Construction stage | • Annex 5, TM-EIAO |

Environmental Mitigation Implementation Schedule –
Contract No. HY/2014/09 (Ho Man Tin Access Shaft)

| EIA Ref. | EM&A Log Ref. | Recommended Mitigation Measures | Objectives of the Recommended Measures & Main Concerns to address | Implementation Agent | Location / Timing | Implementation Stage | Requirements and/ or standards to be achieved |
|---|---|---|---|---|---|---|---|
| | | | screening | | | | |
| S5.4.1 | N3 | Install movable noise barriers (typical design is wooden framed barrier with a small-cantilevered on a skid footing with 25mm thick internal sound absorptive lining), acoustic mat or full enclosure, screen the noisy plants including air compressors, generators and handheld breakers, etc. | Sreen the noisy plant items to be used at all construction sites | Contractor | All construction sites where practicable | Construction stage | • Annex 5, TM-EIAO |
| S5.4.1 | N4 | Use 'Quiet plant' | Reduce the noise levels of plant items | Contractor | All construction sites where practicable | Construction stage | • Annex 5, TM-EIAO |
| S5.4.1 | N5 | Loading/ unloading activities should be carried out inside the full enclosure of mucking out points. | Reduce the noise levels of loading/ unloading activities | Contractor | Mucking out locations | Construction stage | • Annex 5, TM-EIAO |
| S5.4.1 | N6 | Sequencing operation of construction plants where practicable. | Operate sequentially within the same work site | Contractor | All construction sites where | Construction stage | • Annex 5, TM-EIAO |

Environmental Mitigation Implementation Schedule –
Contract No. HY/2014/09 (Ho Man Tin Access Shaft)

| EIA Ref. | EM&A Log Ref. | Recommended Mitigation Measures | Objectives of the Recommended Measures & Main Concerns to address | Implementation Agent | Location / Timing | Implementation Stage | Requirements and/ or standards to be achieved |
|---|---|---|---|---|---|---|---|
| | | | to reduce the construction airborne noise | | practicable | | |
| S5.4.1 | N7 | Implement a noise monitoring programme under EM&A programme. | Monitor the construction noise levels at the selected representative location | Contractor | Selected rep. noise monitoring station | Construction stage | • TM-EIAO |
| Water Quality (Construction Phase) | | | | | | | |
| S6.9.1.1 | W1 | In accordance with the Practice Note for Professional Persons on Construction Site Drainage, Environmental Protection Department, 1994 (ProPECC PN1/94), construction phase mitigation measures shall include the following:<br><br><u>Construction Runoff</u><br>• At the start of site establishment, perimeter cut-off drains to | To minimize water quality impact from the construction site runoff and general construction activities | Contractor | All construction sites where practicable | Construction stage | • Water Pollution Control Ordinance<br>• ProPECC PN 1/94<br>• TM-EIAO<br>• TM-DSS |

Environmental Mitigation Implementation Schedule –
Contract No. HY/2014/09 (Ho Man Tin Access Shaft)

| EIA Ref. | EM&A Log Ref. | Recommended Mitigation Measures | Objectives of the Recommended Measures & Main Concerns to address | Implementation Agent | Location / Timing | Implementation Stage | Requirements and/ or standards to be achieved |
|---|---|---|---|---|---|---|---|
| | | direct off-site water around the site should be constructed with internal drainage works and erosion and sedimentation control facilities implemented. Channels (both temporary and permanent drainage pipes and culverts), earth bunds or sand bag barriers should be provided on site to direct stormwater to silt removal facilities. The design of the temporary on-site drainage system will be undertaken by the contractor prior to the commencement of construction;<br>• The dikes or embankments for flood protection should be implemented around the boundaries of earthwork areas. Temporary ditches should be provided to facilitate the runoff discharge into an appropriate watercourse, through a silt/ sediment trap. The sediment/ silt traps should be incorporated in the permanent drainage channels to enhance deposition rates;<br>• The design of efficient silt removal facilities should be based on the guidelines in Appendix A1 of ProPECC PN 1/94, which | | | | | |

Environmental Mitigation Implementation Schedule –
Contract No. HY/2014/09 (Ho Man Tin Access Shaft)

| EIA Ref. | EM&A Log Ref. | Recommended Mitigation Measures | Objectives of the Recommended Measures & Main Concerns to address | Implementation Agent | Location / Timing | Implementation Stage | Requirements and/ or standards to be achieved |
|---|---|---|---|---|---|---|---|
| | | states that the retention time for silt/ sand traps should be 5 minutes under maximum flow conditions. Sizes may vary depending upon the flow rate, but for a flow rate of 0.1 $m^3/s$ a sedimentation basin of 30 $m^3$ would be required and for a flow rate of 0.5 $m^3/s$ the basin would be 150 $m^3$. The detailed design of the sand/ silt traps shall be undertaken by the contractor prior to the commencement of construction;<br>• All exposed earth areas should be completed and vegetated as soon as possible after earthworks have been completed, or alternatively, within 14 days of the cessation of earthworks where practicable. Exposed slope surfaces should be covered by tarpaulin or other means;<br>• The overall slope of the site should be kept to a minimum to reduce the erosive potential of surface water flows, and all traffic areas and access roads protected by coarse stone ballast. An additional advantage accruing from the use of crushed stone is the positive traction gained during prolonged | | | | | |

Environmental Mitigation Implementation Schedule –
Contract No. HY/2014/09 (Ho Man Tin Access Shaft)

| EIA Ref. | EM&A Log Ref. | Recommended Mitigation Measures | Objectives of the Recommended Measures & Main Concerns to address | Implementation Agent | Location / Timing | Implementation Stage | Requirements and/ or standards to be achieved |
|---|---|---|---|---|---|---|---|
| | | periods of inclement weather and the reduction of surface sheet flows;<br>• All drainage facilities and erosion and sediment control structures should be regularly inspected and maintained to ensure proper and efficient operation at all times and particularly following rainstorms. Deposited silt and grit should be removed regularly and disposed of by spreading evenly over stable, vegetated areas;<br>• Measures should be taken to minimize the ingress of site drainage into excavations. If the excavation of trenches in wet periods is necessary, they should be dug and backfilled in short sections wherever practicable. Water pumped out from trenches or foundation excavations should be discharged into storm drains via silt removal facilities;<br>• Open stockpiles of construction materials (for example, aggregates, sand and fill material) of more than 50$m^3$ should be covered with tarpaulin or similar fabric during rainstorms. | | | | | |

Environmental Mitigation Implementation Schedule –
Contract No. HY/2014/09 (Ho Man Tin Access Shaft)

| EIA Ref. | EM&A Log Ref. | Recommended Mitigation Measures | Objectives of the Recommended Measures & Main Concerns to address | Implementation Agent | Location / Timing | Implementation Stage | Requirements and/ or standards to be achieved |
|---|---|---|---|---|---|---|---|
| | | Measures should be taken to prevent the washing away of construction materials, soil, silt or debris into any drainage system;<br>• Manholes should always be adequately covered and temporarily sealed so as to prevent silt, construction materials or debris being washed into the drainage system and storm runoff being directed into foul sewers;<br>• Precautions be taken at any time of year when rainstorms are likely, actions to be taken when a rainstorm is imminent or forecasted, and actions to be taken during or after rainstorms are summarized in Appendix A2 of ProPECC PN 1/94. Particular attention should be paid to the control of silty surface runoff during storm events, especially for areas located near steep slopes;<br>• All vehicles and plant should be cleaned before leaving a construction site to ensure no earth, mud, debris and the like is deposited by them on roads. An adequately designed and | | | | | |

Environmental Mitigation Implementation Schedule –
Contract No. HY/2014/09 (Ho Man Tin Access Shaft)

| EIA Ref. | EM&A Log Ref. | Recommended Mitigation Measures | Objectives of the Recommended Measures & Main Concerns to address | Implementation Agent | Location / Timing | Implementation Stage | Requirements and/ or standards to be achieved |
|---|---|---|---|---|---|---|---|
| | | site wheel washing facilities should be provided at every construction site exit where practicable. Wash-water should have sand and silt settled out and removed at least on a weekly basis to ensure the continued efficiency of the process. The section of access road leading to, and exiting from, the wheel wash bay to the public road should be paved with sufficient backfall toward the wheel wash bay to prevent vehicle tracking of soil and silty water to public roads and drains;<br>• Oil interceptors should be provided in the drainage system downstream of any oil/ fuel pollution sources. The oil interceptors should be emptied and cleaned regularly to prevent the release of oil and grease into the storm water drainage system after accidental spillage. A bypass should be provided for the oil interceptors to prevent flushing during heavy rain;<br>• Construction solid waste, debris and rubbish on site should be | | | | | |

Environmental Mitigation Implementation Schedule –
Contract No. HY/2014/09 (Ho Man Tin Access Shaft)

| EIA Ref. | EM&A Log Ref. | Recommended Mitigation Measures | Objectives of the Recommended Measures & Main Concerns to address | Implementation Agent | Location / Timing | Implementation Stage | Requirements and/ or standards to be achieved |
|---|---|---|---|---|---|---|---|
| | | collected, handled and disposed of properly to avoid water quality impacts;<br>• All fuel tanks and storage areas should be provided with locks and sited on sealed areas, within bunds of a capacity equal to 110% of the storage capacity of the largest tank to prevent spilled fuel oils from reaching water sensitive receivers nearby;<br>• Adopt best management practices;<br>• All earth works should be conducted sequentially to limit the amount of construction runoff generated from exposed areas during the wet season (April to September) as far as practicable. | | | | | |
| S6.9.1.2 | W2 | <u>Underground Works</u><br>• Uncontaminated discharge should pass through sedimentation tanks prior to of-site discharge;<br>• The wastewater with a high concentration of SS should be | To minimize construction water quality impact from the works | Contractor | All access shaft location | Construction stage | • Water Pollution Control Ordinance<br>• ProPECC PN 1/94<br>• TM-DSS |

Environmental Mitigation Implementation Schedule –
Contract No. HY/2014/09 (Ho Man Tin Access Shaft)

| EIA Ref. | EM&A Log Ref. | Recommended Mitigation Measures | Objectives of the Recommended Measures & Main Concerns to address | Implementation Agent | Location / Timing | Implementation Stage | Requirements and/ or standards to be achieved |
|---|---|---|---|---|---|---|---|
| | | treated (e.g. by sedimentation tanks with sufficient retention time) before discharge. Oil interceptors would also be required to remove the oil, lubricants and grease from the wastewater;<br>• Direct discharge of the bentonite slurry (as a result of D-wall) is not allowed. It should be reconditioned and reused wherever practicable. Temporary storage locations (typically a properly closed warehouse) should be provided on site for any unused bentonite that needs to be transported away after all the related construction activities area completed. The requirements in ProPECC PN 1/94 should be adhered to in the handling and disposal of bentonite slurries. | | | | | • TM-EIAO |
| S6.9.1.3 | W3 | <u>Sewage Effluent</u><br>• Portable chemical toilets and sewage holding tanks are recommended for handling the construction sewage generated by the workforce. A licensed contractor should be | To minimize water quality from sewage effluent | Contractor | All construction sites where practicable | Construction stage | • Water Pollution Control Ordinance<br>• TM-DSS |

Environmental Mitigation Implementation Schedule –
Contract No. HY/2014/09 (Ho Man Tin Access Shaft)

| EIA Ref. | EM&A Log Ref. | Recommended Mitigation Measures | Objectives of the Recommended Measures & Main Concerns to address | Implementation Agent | Location / Timing | Implementation Stage | Requirements and/ or standards to be achieved |
|---|---|---|---|---|---|---|---|
| | | employed to provide appropriate and adequate portable toilets and be responsible for appropriate disposal and maintenance. | | | | | |
| S6.9.1.6 | W6 | <u>Accidental Spillage</u><br><br>In order to prevent accidental spillage of chemicals, the following is recommended:<br>• All the tanks, containers, storage area should be bunded and the locations should be locked as far as possible from the sensitive watercourse and stormwater drains;<br>• The Contractor should register as a chemical waste producer if chemical wastes would be generated. Storage of chemical waste arising from the construction activities should be stored with suitable labels and warnings.<br>Disposal of chemical wastes should be conducted in compliance | To minimize water quality impact from accidental spillage | Contractor | All construction site where practicable | Construction stage | • Water Pollution Control Ordinance<br>• ProPECC PN 1/94<br>• TM-EIAO<br>• TM-DSS |

Environmental Mitigation Implementation Schedule –
Contract No. HY/2014/09 (Ho Man Tin Access Shaft)

| EIA Ref. | EM&A Log Ref. | Recommended Mitigation Measures | Objectives of the Recommended Measures & Main Concerns to address | Implementation Agent | Location / Timing | Implementation Stage | Requirements and/ or standards to be achieved |
|---|---|---|---|---|---|---|---|
| | | with the requirements as stated in the Waste Disposal (Chemical Waste) (General) Regulation. | | | | | |
| Waste Management (Construction Waste) | | | | | | | |
| S7.4.1 | WM1 | <u>On-site sorting of C&D material</u><br>• Geological assessment should be carried out by competent persons on site during excavation to identify materials which are not suitable to use as aggregate in structural concrete (e.g. volcanic rock, Aplite dyke rock, etc.). Volcanic rock and Aplite dyke rock should be separated at the source sites as far as practicable and stored at designated stockpile area preventing them from delivering to crushing facilities. The crushing plant operator should also be reminded to set up measures to prevent unsuitable rock from ending up at concrete batching plants and be turned into concrete for structural use. Details regarding control measures at source | Separation of unsuitable rock from ending up at concrete batching plants and be turned into concrete for structural use | Contractor | All construction sites | Construction stage | • DEVB (W) No. 6/2010 |

Environmental Mitigation Implementation Schedule –
Contract No. HY/2014/09 (Ho Man Tin Access Shaft)

| EIA Ref. | EM&A Log Ref. | Recommended Mitigation Measures | Objectives of the Recommended Measures & Main Concerns to address | Implementation Agent | Location / Timing | Implementation Stage | Requirements and/ or standards to be achieved |
|---|---|---|---|---|---|---|---|
| | | site and crushing facilities should be submitted by the Contractor for the Engineer to review and agree. In addition, site records should also be kept for the types of rock materials excavated and the traceability of delivery will be ensured with the implementation of Trip Ticket System and enforced by site supervisory staff as stipulated under DEVB TC(W) No. 6/2010 for tracking of the correct delivery to the rock crushing facilities for processing into aggregates. Alternative disposal option for the reuse of volcanic rock and Aplite Dyke rock, etc. should be explored. | | | | | |
| S7.5.1 | WM2 | <u>Construction and Demolition Material</u><br>• Maintain temporary stockpiles and reuse excavated fill material for backfilling and reinstatement;<br>• Carry out on-site sorting;<br>• Make provisions in the Contract documents to allow and promote the use of recycled aggregates where appropriate;<br>• Adopt 'selective demolition' technique to demolish the | Good site practice to minimize the waste generation and recycle the C&D materials as far as practicable so as to reduce the amount | Contractor | All construction sites | Construction stage | • Land (Miscellaneous Provisions) Ordinance<br>• Waste Disposal Ordinance<br>• ETWB TCW No. |

Environmental Mitigation Implementation Schedule –
Contract No. HY/2014/09 (Ho Man Tin Access Shaft)

| EIA Ref. | EM&A Log Ref. | Recommended Mitigation Measures | Objectives of the Recommended Measures & Main Concerns to address | Implementation Agent | Location / Timing | Implementation Stage | Requirements and/ or standards to be achieved |
|---|---|---|---|---|---|---|---|
| | | existing structures and facilities with a view to recovering broken concrete effectively for recycling purpose, where possible;<br>• Implement a trip-ticket system for each works contract to ensure that the disposal of C&D materials are properly documented and verified; and<br>• Implement an enhanced Waste Management Plan similar to ETWBTC (Works) No. 19/2005 – "Environmental Management on Construction Sites" to encourage on-site sorting of C&D materials and to minimize their generation during the course of construction. | for final disposal | | | | 19/2005 |
| S7.5.1 | WM3 | <u>C&D Waste</u><br>• Standard formwork or pre-fabrication should be used as far as practicable in order to minimize the arising of C&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 | Good site practice to minimize the waste generation and recycle the C&D materials as far as practicable so as to | Contractor | All construction sites | Construction stage | • Land (Miscellaneous Provisions) Ordinance<br>• Waste Disposal Ordinance |

Environmental Mitigation Implementation Schedule –
Contract No. HY/2014/09 (Ho Man Tin Access Shaft)

| EIA Ref. | EM&A Log Ref. | Recommended Mitigation Measures | Objectives of the Recommended Measures & Main Concerns to address | Implementation Agent | Location / Timing | Implementation Stage | Requirements and/ or standards to be achieved |
|---|---|---|---|---|---|---|---|
| | | 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;<br>• The Contractor should recycle as much of the C&D materials as possible on-site. Public fill and C&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. | reduce the amount for final disposal | | | | • ETWB TCW No. 19/2005 |
| S7.5.1 | WM6 | <u>Chemical Waste</u><br>• 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;<br>• Containers used for the storage of chemical wastes should be | Control the chemical waste and ensure proper storage, handling and disposal | Contractor | All construction sites | Construction stage | • Waste Disposal (Chemical Waste) (General) Regulation<br>• Code of Practice on the Packaging, |

Environmental Mitigation Implementation Schedule –
Contract No. HY/2014/09 (Ho Man Tin Access Shaft)

| EIA Ref. | EM&A Log Ref. | Recommended Mitigation Measures | Objectives of the Recommended Measures & Main Concerns to address | Implementation Agent | Location / Timing | Implementation Stage | Requirements and/ or standards to be achieved |
|---|---|---|---|---|---|---|---|
| | | 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 L unless the specification has been approved by EPD, and display a label in English and Chinese in accordance with instructions prescribed in Schedule 2 of the regulation;<br>• 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;<br>• Disposal of chemical waste should be via a licensed waste collector, be to a facility licensed to receive chemical waste, | | | | | Labelling and Storage of Chemical Waste |

Environmental Mitigation Implementation Schedule –
Contract No. HY/2014/09 (Ho Man Tin Access Shaft)

| EIA Ref. | EM&A Log Ref. | Recommended Mitigation Measures | Objectives of the Recommended Measures & Main Concerns to address | Implementation Agent | Location / Timing | Implementation Stage | Requirements and/ or standards to be achieved |
|---|---|---|---|---|---|---|---|
| | | 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 EPD. | | | | | |
| S7.5.1 | WM7 | <u>General Refuse</u><br>• General refuse generated on-site should be stored in enclosed bins or compaction units separately from construction and chemical wastes;<br>• 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.<br>• Aluminum 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; | Minimize production of the general refuse and avoid odour, pest and litter impacts | Contractor | All construction sites | Construction stage | • Waste Disposal Ordinance |

Environmental Mitigation Implementation Schedule –
Contract No. HY/2014/09 (Ho Man Tin Access Shaft)

| EIA Ref. | EM&A Log Ref. | Recommended Mitigation Measures | Objectives of the Recommended Measures & Main Concerns to address | Implementation Agent | Location / Timing | Implementation Stage | Requirements and/ or standards to be achieved |
|---|---|---|---|---|---|---|---|
| | | • 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. | | | | | |
| Hazard to Life | | | | | | | |
| S9.18 | H1 | Blasting activities regarding transport and use of explosives should be supervised and audited by competent site staff to ensure full compliance with the blasting permit conditions. | To ensure that the risks from the proposed explosives handling and transport would be acceptable | Contractor | Works areas at which explosives would be used | Construction stage | • Dangerous Goods Ordinance |
| S9.6, para.4 | H2 | Detonators shall not be transported in the same vehicle with other Category 1 Dangerous Goods. | To reduce the risk of explosion during the transport of cartridged emulsion | Contractor | - | Construction stage | • Dangerous Goods Ordinance |
| S9.6, para.8 | H3 | The explosives delivery trucks should be approved by Mines Division and should meet the regulatory requirements for | To comply with the requirements for | Contractor | - | Construction stage | • Dangerous Goods Ordinance |

Environmental Mitigation Implementation Schedule –
Contract No. HY/2014/09 (Ho Man Tin Access Shaft)

| EIA Ref. | EM&A Log Ref. | Recommended Mitigation Measures | Objectives of the Recommended Measures & Main Concerns to address | Implementation Agent | Location / Timing | Implementation Stage | Requirements and/ or standards to be achieved |
|---|---|---|---|---|---|---|---|
| | | transport of explosives. | approval of an explosives delivery vehicle | | | | |
| S9.10, para.7 and S9.18 | H4 | Blast cover should be provided for shaft at HMT, and kept closed during blasting.<br><br>Provision of blast doors or heavy duty blast curtains should be implemented at the shaft to prevent flyrock and control the air overpressure. | To ensure safe use of explosives | Contractor | Shaft | Construction stage | - |
| S9.16 | H5 | Only the required quantity of explosives for a particular blast should be transported to avoid the return. | To reduce risks during explosives transport | Contractor | Works areas at which explosives would be used | Construction stage | - |
| S9.18 | H7 | The approved truck dedicated for transport of explosives should comply with the "Guidance Note on Requirements for Approval of an Explosives Delivery Vehicle" issued by CEDD Mines Division. | To reduce the risk during explosives transport | Contractor | Works areas of which explosives | Construction stage | • Dangerous Goods Ordinance |

Environmental Mitigation Implementation Schedule –
Contract No. HY/2014/09 (Ho Man Tin Access Shaft)

| EIA Ref. | EM&A Log Ref. | Recommended Mitigation Measures | Objectives of the Recommended Measures & Main Concerns to address | Implementation Agent | Location / Timing | Implementation Stage | Requirements and/ or standards to be achieved |
|---|---|---|---|---|---|---|---|
| | | The truck should be periodically inspected and properly maintained in good operation conditions. The fuel carried in the fuel tank should be minimized to reduce the duration of fire. Adequate fire fighting equipment shall be provided, inspected and replaced periodically (e.g. fire extinguishers). | | | would be used | | |
| S9.18 | H8 | The driver and his assistant should be physically healthy, experienced and have good safe driving records. The driver should hold a proper driving licence for the approved transport truck. Dedicated training programme and regular road safety briefing sessions/ workshops should be provided to enhance their safe driving attitude and practice. Smoking should be strictly prohibited. | To reduce the risk during explosives transport | Contractor | Works areas at which explosives would be used | Construction stage | - |
| S9.18 | H9 | Emergency response plans in case of road accident should be prepared and implemented. The driver and his assistant should be familiar with the emergency procedures including evacuation, and proper communication/ fire-fighting equipment should be provided to the driver and his assistant. | To reduce the risk during explosives transport | Contractor | Works areas at which explosives would be used | Construction stage | - |

Environmental Mitigation Implementation Schedule –
Contract No. HY/2014/09 (Ho Man Tin Access Shaft)

| EIA Ref. | EM&A Log Ref. | Recommended Mitigation Measures | Objectives of the Recommended Measures & Main Concerns to address | Implementation Agent | Location / Timing | Implementation Stage | Requirements and/ or standards to be achieved |
|---|---|---|---|---|---|---|---|
| S9.18 | H10 | Close liaison and communication among Mines Division, Contractors for transport of explosives, and working staff of the blasting should be established. In case of any change of work schedule leading to cancellation or variation of explosives required, relevant parties should be informed in time to avoid unused explosives at the work sites. | To reduce the risk during explosives transport | Contractor | Works areas at which explosives would be used | Construction stage | - |
| S9.18 | H11 | Close liaison and communication with Fire Services Department should be established to reduce the accidental detonation escalated from a fire. The contractors for transport of explosives should use the preferred transport routes as far as practicable. | To reduce the risk during explosives transport | Contractor | Works areas at which explosives would be used | Construction stage | - |
| S9.18 | H12 | Contingency plan should be prepared for transport of explosives under severe weather conditions such as rainstorms and thunderstorms. | To reduce the risk during explosives transport | Contractor | Works areas at which explosives would be used | Construction stage | - |

Environmental Mitigation Implementation Schedule –
Contract No. HY/2014/09 (Ho Man Tin Access Shaft)

| EIA Ref. | EM&A Log Ref. | Recommended Mitigation Measures | Objectives of the Recommended Measures & Main Concerns to address | Implementation Agent | Location / Timing | Implementation Stage | Requirements and/ or standards to be achieved |
|---|---|---|---|---|---|---|---|
| S9.18 | H13 | For explosive transport, all packages of explosives on the truck should be properly stored in the truck compartment as required. Packaging of the explosives should remain intact (i.e. damage free) until they are transferred to the blasting site. | To reduce the risk during explosives transport | Contractor | Works areas at which explosives would be used | Construction stage | - |
| S9.18 | H14 | Availability of a parking space should be ensured before commencement of transport of explosives. Location for loading and unloading of explosives should be as close as possible to the shaft. No hot work should be performed in the vicinity during the time of loading and unloading. | To reduce the risk during explosives transport | Contractor | Works areas at which explosives would be used | Construction stage | - |
| S9.18 | H22 | It is recommended to explore to minimize the use of the cartridged emulsion explosives and maximize the use of bulk emulsion explosive as far as practicable. | To reduce the risk during explosives transport | Contractor | Works areas at which explosives would be used | Construction stage | - |
| S9.18 | H24 | It is recommended to explore to use smaller explosive charges such as 'cast boosters' or 'mini-cast booster' instead of cartridged | To reduce the risk during explosives | Contractor | Works areas at which | Construction stage | - |

Environmental Mitigation Implementation Schedule –
Contract No. HY/2014/09 (Ho Man Tin Access Shaft)

| EIA Ref. | EM&A Log Ref. | Recommended Mitigation Measures | Objectives of the Recommended Measures & Main Concerns to address | Implementation Agent | Location / Timing | Implementation Stage | Requirements and/ or standards to be achieved |
|---|---|---|---|---|---|---|---|
| | | emulsion as primers for bulk emulsion. This option reduces the quantity of explosives required for transportation for the sections where bulk emulsion will be used. | transport | | explosives would be used | | |
| Landscape & Visual | | | | | | | |
| S10.10.1 Table 10.11 | LV1 | <u>Good Site Management</u><br>• Large temporary stockpiles of excavated material shall be covered with unobtrusive sheeting to prevent dust and dirt spreading to adjacent landscape areas and vegetation, and to create a neat and tidy visual appearance.<br>• Construction plant and building material shall be orderly and carefully stored in order to create a neat and tidy visual appearance. | Minimize visual impact | Contractor | Within Project site | Construction stage | - |
| S10.10.1 Table 10.11 | LV4 | <u>Screen Hoarding</u><br>• Decorative screen hoarding should be erected to screen the public from the construction area. It should be designed to be compatible with the existing urban context. | Minimize visual impact | Contractor | Within Project site | Construction stage | - |

Environmental Mitigation Implementation Schedule –
Contract No. HY/2014/09 (Ho Man Tin Access Shaft)

| EIA Ref. | EM&A Log Ref. | Recommended Mitigation Measures | Objectives of the Recommended Measures & Main Concerns to address | Implementation Agent | Location / Timing | Implementation Stage | Requirements and/ or standards to be achieved |
|---|---|---|---|---|---|---|---|
| S10.10.1 Table 10.11 | LV5 | Lighting Control during Construction<br>• All lighting in the construction site shall be carefully controlled to minimize light pollution and night-time glare to nearby residencies and GIC. The Contractor shall consider other security measures, which shall minimize the visual impacts. | Minimize visual impact | Contractor | Within Project site | Construction stage | - |
| S10.10.1 Table 10.11 | LV6 | Erosion Control<br>• The potential for soil erosion shall be reduced by minimizing the extent of vegetation disturbance on site and by providing a protective cover over newly exposed soil. | Minimize landscape impact | Contractor | Within Project site | Construction stage | - |
| S10.10.1 Table 10.11 | LV7 | Tree Protection & Preservation<br>• Carefully protected during construction. Tree protection measures will be detailed at the Tree Removal Application stage and plans submitted to the relevant Government Department for approval in due course in accordance with ETWB TC no. 3/2006. | Minimize landscape and visual impact | Contractor | Within Project site | Construction stage | • 'Guidelines for Tree Risk Management and Assessment Arrangement on an Area Basis and on a Tree Basis', Greening, |

Environmental Mitigation Implementation Schedule –
Contract No. HY/2014/09 (Ho Man Tin Access Shaft)

| EIA Ref. | EM&A Log Ref. | Recommended Mitigation Measures | Objectives of the Recommended Measures & Main Concerns to address | Implementation Agent | Location / Timing | Implementation Stage | Requirements and/ or standards to be achieved |
|---|---|---|---|---|---|---|---|
| | | | | | | | Landscape and Tree Management (GLTM) Section, DEVB<br>• Latest recommended horticultural practices from GLTM Section, DEVB |
| S10.10.1 Table 10.11 | LV8 | Tree Transplantation<br>• For trees unavoidably affected by the Project that have to be removed, where practical transplantation will be chosen as the top priority method of removal. If this is not possible or practical compensatory planting will be provided for trees unavoidably felled (See LV10). For trees unavoidably | Minimize landscape and visual impact | Contractor | Within Project site and designated off-site locations | Prior to Construction stage | • ETWB TCW 3/2006<br>• Latest recommended horticultural practices from |

Environmental Mitigation Implementation Schedule –
Contract No. HY/2014/09 (Ho Man Tin Access Shaft)

| EIA Ref. | EM&A Log Ref. | Recommended Mitigation Measures | Objectives of the Recommended Measures & Main Concerns to address | Implementation Agent | Location / Timing | Implementation Stage | Requirements and/ or standards to be achieved |
|---|---|---|---|---|---|---|---|
| | | affected by the Project works that are transplanted, transplantation must be carried out in accordance with ETWB TCW 2/2004 and 3/2006. | | | | | Greening, Landscape and Tree Management (GLTM) Section, DEVB<br>• ETWB TCW 2/2004 |
| S10.10.1 Table 10.11 | LV9 | <u>Compensatory Planting</u><br>• For trees unavoidably affected by the Project that have to be removed, where practical transportation will be chosen as the top priority method of removal but if this is not possible or practical compensatory planting will be provided for trees unavoidably felled. All felled trees shall be compensated for by planting trees to the satisfaction of relevant Government projects. Required numbers and locations of compensatory trees shall be determined and agreed separately with | Minimize visual impact and also enhance landscape | Contractor | Within Project site | Construction stage | • ETWB TCW 3/2006<br>• Latest recommended horticultural practices from Greening, Landscape and Tree |

Environmental Mitigation Implementation Schedule –
Contract No. HY/2014/09 (Ho Man Tin Access Shaft)

| EIA Ref. | EM&A Log Ref. | Recommended Mitigation Measures | Objectives of the Recommended Measures & Main Concerns to address | Implementation Agent | Location / Timing | Implementation Stage | Requirements and/ or standards to be achieved |
|---|---|---|---|---|---|---|---|
| | | Government during the Tree Felling Application process under ETWBTC 3/2006.<br>• Compensatory tree planting may be incorporated into public open spaces and along roadside amenity areas affected by the construction works and therefore be part of the bigger wider planting plans. Onsite compensation planting is preferred but if necessary, additional receptor sites outside the Works Area shall be agreed separately with Government during the Tree Felling Application process. | | | | | Management (GLTM) Section, DEVB<br>• ETWB TCW 2/2004 |
| Cultural Heritage Impact (Construction Phase) | | | | | | | |
| S11.4.4 | CH1 | The contractor should be alerted during the construction on the possibility of locating archaeological remains and as a precautionary measure, AMO shall be informed immediately in case of discovery of antiquities or supposed antiquities in the subject sites. | To preserve any cultural heritage items which may be removed and damaged by the excavation | Contractor | During construction works | Construction stage | • AMOs requirements |
| EM&A Project | | | | | | | |

Environmental Mitigation Implementation Schedule –
Contract No. HY/2014/09 (Ho Man Tin Access Shaft)

| EIA Ref. | EM&A Log Ref. | Recommended Mitigation Measures | Objectives of the Recommended Measures & Main Concerns to address | Implementation Agent | Location / Timing | Implementation Stage | Requirements and/ or standards to be achieved |
|---|---|---|---|---|---|---|---|
| S13.2 | EM1 | An Independent Environmental Checker needs to be employed as per the EM&A Manual | Control EM&A Performance | Highways Department | All construction sites | Construction stage | • EIAO Guidance Note No. 4/2010<br>• TM-EIAO |
| S13.2-13.4 | EM2 | • An Environmental Team needs to be employed as per the EM&A Manual;<br>• Prepare a systematic Environmental Management Plan to ensure effective implementation of the mitigation measures;<br>• An environmental impact monitoring needs to be implemented by the Environmental Team to ensure all the requirements given in the EM&A Manual are fully complied with. | Perform environmental monitoring & auditing | Highways Department/ Contractor | All construction sites | Construction stage | • EIAO Guidance Note No. 4/2010<br>• TM-EIAO |