13 SUMMARY OF ENVIRONMENTAL OUTCOMES

13.1 Population and Environmental Areas Protected

Affected Population along the Project

13.1.1 According to the RODP, the estimated total number of resident for the development is 25,000. The total area of the platform area for the development is approximately 40ha. The average plot ratio for subsidised housing and private housing is 6.3 and 4.2 respectively.

13.1.2 The construction/ development of the Study Area will commence after the rehabilitation contract (No. GE/96/10) has been completed and the site handed over to the Project Proponent. Hence, no land resumption is required for the development.

13.1.3 To minimise the potential environmental nuisance during the construction phase, phasing of the construction programme is proposed. In addition, good site practices and mitigation measures have been recommended in this study to ensure compliance of the relevant legislation/ standards during the construction and operational phase of the Project.

Habitat Compensation

13.1.4 A combined area of 1.13 ha young secondary woodlands will be directly impacted by the proposed road and underpass at the southeast of the Project Site. Loss of this habitat is compensated by planting of native tree and shrub species at the proposed Wooded Area (about 1.2 ha). This Wooded Area is located within the proposed Quarry Park at the northern side of the Study Area, and connected to the existing benches of rehabilitation plantations. it is agreed that LCSD will be responsible for the long-term maintenance and management of this Wooded Area and Quarry Park throughout the operation phase.

13.2 Environmental Friendly Design and Benefits

13.2.1 Key green features incorporated into the Urban Design Plan of the ARQ development (refer **Appendix 13.1**) is summarised below.

Pedestrian Corridors

13.2.2 Three pedestrian corridors will be provided. The first corridor runs north-south parallel to the rock face through the Northern Community, linking the residential area to the Quarry Park at one end and the Civic Core at the other. It is also proposed with a cycling path to connect private housing sites to the Civic Core. The second corridor links the District Open Space in DAR to the rock face through the Civic Core and serves as a major pedestrian connection between the Planning Scheme Area and its surrounding. The third corridor runs north-south connecting all residential and school sites in the Southern Community, and a 10m-wide green corridor will be reserved to enhance the pedestrian environment. It will also provide a legible path for keen walkers who want to access from Po Lam Road to key destinations within the ARQ.

13.2.3 A pleasant environment along the Pedestrian Corridors will be created by providing enhanced streetscape design and treatments of site frontages along the corridors. The

Pedestrian Corridors will be well-lit and be made fully accessible with ramps or elevators if necessary. A cover for the walkway will be considered especially at locations where two public buildings can easily be connected or people are likely to congregate. Directional signs for key designations should also be provided at regular intervals.

Open Space and Landscape Framework

13.2.4 A Quarry Park has been proposed all along to the southwestern boundary and northwestern portion (refer **Appendix 13.1**). The southern portion of the Quarry Park will be a Green Promenade along the platform edge adjoining DAR. It will provide a relaxing open space for the future residents of the ARQ, DAR and the wider Sau Mau Ping area.

13.2.5 The open space network will extend from the Quarry Park and weave into the residential areas. Green Spines and Pedestrian Corridors will not only serve as interior linkages to the site development, but will become linear open spaces with ample space for pedestrian, circulation network and greenery. They will be designed with the provision of seating, urban hard landscape features and visual landscape amenities for visual relief.

Building Height Strategy and View Corridor

13.2.6 Building height restrictions have been imposed to protect the visual access to Tai Sheung Tok ridgeline from territorial vantage points at Hong Kong Island north or future Kai Tak development area. Further building height limits have been imposed on residential developments along major public spaces and pedestrian corridors to create a more open and humanistic living environment, and a visually interesting development profile that complements the dramatic rock face and ridgeline of Tai Sheung Tok.

13.2.7 Low-rise residential blocks ranging from 30m to 40m will be provided fronting the Quarry Park and the Green Promenade to create a more humanistic-scale environment along major public realms and introduce height variations to the building cluster. High-rise residential blocks ranging from 80m to 100m will be restricted to the sites closest to the rock face backdrop to minimize the possible adverse visual impacts of the blocks. Medium-rise blocks ranging from 50m to 75m will be built in between the low-rise and high-rise blocks to create stepped height profiles.

13.2.8 Generous visual corridors have been preserved between building clusters in order to secure inter-visibility between the Sau Mau Ping area and the rock face. They also serve as visual relief within the new development. In particular, a low-rise building zone is designated at the civic core to preserve an unobstructed view for visitors on the lookout on the rock face and to create a generous visual relief for the Sau Mau Ping area.

13.3 Summary of the Measures taken for the Avoidance and Minimisation of Environmental Impacts

13.3.1 The various chapters of this EIA Report have presented key measures to minimise the potential environmental impacts associated with the Project in the construction and operational stages. Key measures to minimise the environmental impacts are summarised as below:

Phasing of Implementation

13.3.2 In order to minimise the environmental nuisance during the construction phase, the Project will be implemented in phases. **Table 13.1** summarises the phasing of the implementation.

Table 13.1: Summary of the tentative implementation programme

Works Package	Works Components	Time Line
Works Package 1	Site formation at the southern portion of the Study Area	mid 2016 – end 2018
	Internal roads at the southern portion of the Study Area	
	Access road for main external access via. Po Lam Road	
	Access road for supplementary external access via. DAR local road with associated bus bays and semi-enclosure noise barrier	
	Supporting infrastructure works, including two-way escalators and subways, for pedestrian connectivity between development of ARQ and DAR	
	Stormwater drainage systems at the southern portion of the Study Area	
	Sewerage systems at the southern portion of the Study Area	
	Water supply systems at the southern portion of the Study Area	
	Landscaping at the southern portion of the Study Area	
Works Package 2	Site formation at the northern portion of the Study Area	early 2018 – end 2020
	Internal roads with associated public transport terminus at the northern portion of the Study Area	
	Stormwater drainage systems at the northern portion of the Study Area	
	Sewerage systems at the northern portion of the Study Area	
	Water supply systems at the northern portion of the Study Area	
	Landscaping at the northern portion of the Study Area	
Works Package 3	Drainage retention tanks in the Study Area	mid 2016 – mid 2019
Works Package 4	Viewing platforms	early 2018 – end 2020
Works Package 5	Salt and fresh water pumping stations in the Study Area	mid 2018 – end 2020
	Service reservoirs in the Study Area	
Works Package 6	Road improvement works at J/O Lin Tak Road and Sau Mau Ping Road, including road widening works at Lin Tak Road and a new vehicular bridge form Link Tak Road to Sau Mau Ping Road with associated semi-enclosure noise barrier	early 2017 – early 2022 (Separate EIA will be conducted for these works components. Details refer **Sections 1.4 & 1.5**)
	BBI at TKO Tunnel Toll Plaza Area	
	Pedestrian crossing facilities, including footbridge	

Works Package	Works Components	Time Line
	with lift towers and subway	
	Associated site formation works	
Works Package 7	Road improvement works at J/O Clear Water Bay Road and Road L1 constructed under DAR, including provision of u-turn facility.	early 2017 – early 2021 (Separate EIA will be conducted for these works components. Details refer **Sections 1.4 & 1.5**)
	Road improvement works at merging lane at New Clear Water Bay Road near Shun Lee Tsuen Road, including increase of merging length	
	Associated site formation works	
Works Package 8	Rock cavern development	early 2018 – end 2020 (Separate EIA will be conducted for this works component. Details refer **Sections 1.4 & 1.5**)

Construction Dust

13.3.3 In order to reduce the dust impact and achieve compliances of TSP criteria at the ASRs, watering once per hour on the exposed worksites and haul road is recommended. In addition, the dust control requirements stipulated in the Air Pollution Control (Construction Dust) Regulation and good site practices would be in place to further minimise the potential construction dust impact. These would include:

(1) 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;

(2) Any dusty material remaining after a stockpile is removed should be wetted with water and cleared from the surface of roads;

(3) A stockpile of dusty material should not extend beyond the pedestrian barriers, fencing or traffic cones;;

(4) The load of dusty materials on a vehicles leaving a construction site should be covered entirely by impervious sheeting to ensure that the dusty materials do not leak form the vehicle;

(5) Where practicable, vehicles washing facilities including a 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; and

(6) 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.

Construction Noise

13.3.4 The following mitigation measures have been considered to tackle the construction noise impact:

(1) Good site practices to limit noise emissions at the source;

(2) Use of quiet plant and working methods;

(3) Use of site hoarding as noise barrier to screen noise at ground level of NSRs;

(4) Use of shrouds / temporary noise barriers to screen noise from relatively static PMEs;

(5) Use of large full enclosure to screen all the plant, wherever practicable;

(6) Scheduling of construction works outside school examination periods in critical area; and

(7) Alternative use of plant items within one worksite, wherever practicable.

Fixed Noise and Road Traffic Noise

13.3.5 Maximum allowable sound power levels (SWL) have been specified for the proposed pumping station for saltwater and freshwater and the planned rock cavern developments. Detailed design of the proposed pumping station (e.g. the louver details) are yet to be developed, nevertheless, it is recommended that the detailed design should incorporate good practices such as orient louvres away from adjacent NSRs, use of direct noise mitigation measures e.g. silencers, in order to minimise the nuisance on the neighbouring NSRs. Operational road traffic noise impact on the sensitive uses along the Road L4 outside the Study Area would be mitigated by the provision of direct mitigation measure in the form of semi-enclosure.

Water Quality

13.3.6 To minimise water quality impacts during the construction phase, best management practices in accordance with the Practice Note for Professional Persons on Construction Site Drainage, Environmental Protection Department, 1994 (ProPECC PN 1/94) should be implemented as far as practicable.

Sewerage and Sewage

13.3.7 After incorporated latest planning information with total 25,000 and 48,600 populations from ARQ and DAR developments in the hydraulic model network, the discharge peak flow from East Kowloon catchment to KTPTW has been evaluated as 10.93m^3/s.

13.3.8 Based on the latest available development parameters for the on-going projects, the total discharge peak flow to KTPTW will be 12.82m^3/s. It shows that KTPTW with 10.92m^3/s capacity is inadequate to cater for the predicted peak flow. It is understood that EPD's "Upgrading of Kwun Tong Preliminary Treatment Works – Feasibility Study, Agreement No. CE5/2008(DS)" recommended to upgrade the peak capacity to 13.14m^3/s and should be adequate. The anticipated completion date of the KTPTW upgrading works is June 2021, whilst the first population intake of the ARQ is planned in 2022, hence no programme gap is anticipated between the completion of the KTPTW upgrading works and the ARQ development.

13.3.9 Two routes are proposed in ARQ sewerage system (total 2.8km long from size 300mm to 450mm diameter) to collect the sewage generated from ARQ development and convey to downstream sewerage system. Improvement recommendations have been drawn for the surcharged sewers with less than 1 metre freeboard caused by ARQ development. 400m of the downstream sewers at Po Lam Road are recommended to be

upgraded from size 225mm to 450mm diameter. In addition, no other further downstream sewers are proposed to be upgraded.

Waste Management

13.3.10 The amount of C&D material that would need to be transported off site has been minimised as far as practicable in the implementation programme. Opportunity for re-using C&D material has been fully considered and implemented where practicable. Good site practices have been recommended for chemical waste, general refuse and disposal of chemical waste will follow the relevant ordinances.

Land Contamination

13.3.11 A total of five potentially contaminated areas located on fill material in the Study Area were proposed for environmental SI. However, as all areas proposed for environmental SI are privately owned and still in operation, undertaking the environmental SI works at this EIA stage is not feasible. The proposed environmental SI works for these areas should commence once the operation is terminated and the land is resumed.

13.3.12 Following the completion of the environmental SI works, a CAR to present the findings and evaluate the level and extent of potential contamination. If land contamination is identified and remediation is required, a RAP will be prepared to recommend specific remediation measures. Upon completion of the remediation works, if any, a RR that demonstrates the clean-up works are adequate would also be prepared. CAR, RAP and RR would be submitted to EPD for approval prior to commencement of any construction / development works.

Ecological Impact

13.3.13 Measures recommended to avoid, minimise and compensate for the potential ecological impacts of the Project are summarised below:

Measures to compensate the woodland habitat loss

13.3.14 A combined area of 1.13 ha young secondary woodlands will be directly impacted by the proposed road and underpass at the southeast of the Study Area. Loss of this habitat is compensated by planting of native tree and shrub species at the proposed Wooded Area (about 1.2 ha). This Wooded Area is located within the proposed Quarry Park at the northern side of the ARQ, and connected to the existing benches of rehabilitation plantations. Routine monitoring on the survival and growth of the compensatory planting is required to monitor the seedling performance throughout the monitoring period. Moreover, it is agreed that LCSD will be responsible for the long-term maintenance and management of this Wooded Area and Quarry Park throughout the operation phase.

Measures to minimize direct impacts on fauna and flora species of conservation significance

13.3.15 Mitigation measures, including transplantation of any presence of floral species of concern and translocation of fauna species of concern (namely amphibians, freshwater crab and reptiles) found in the habitats within the proposed development and works area, are proposed to minimize the ecological impact on these flora and fauna groups. Prior to the site clearance works and/or commencement of construction works, an updated vegetation survey will be conducted in the habitats which are to be affected by the proposed construction works. The survey will ascertain any presence, as well as update

the conditions, number, locations and habitat types of these species and other rare/protected plant species (if any) identified within construction works areas. Any identified floral species of concern will be properly protected and transplanted (if practical and feasible) to the receptor site(s). The transplanted specimens will be maintained throughout the construction phase to ensure its establishment within the receptor site.

13.3.16 Prior to the site clearance works, any water channels or streams that may be within the developable area of the site should be searched by an appropriately qualified ecologist. Any individual newts (or other species of conservation significance) found should be caught and relocated to a suitable nearby location outside of the development area, such as an adjacent stream in the Assessment Area where this species is known to be present.

Measures to minimize impacts to hydrological condition and water quality of hillside watercourses

13.3.17 Potential indirect impact during the construction phase may include construction run-off or accidental spillage of chemicals, lubricants or pollutants entering any seasonal or permanent wet watercourses identified to the northeast, east and southeast of the Project, in which faunal species of conservation importance were identified in the ecological surveys. The majority of these watercourses are separated from the Study Area by Tai Sheung Tok Hill and the major construction works will concentrate in the existing quarry site and developed area. In addition, construction phase *in situ* mitigation measures are proposed to address these impacts as detailed in the following:

(1) Temporary sewerage and drainage will be designed and installed to collect wastewater and prevent it from entering nearby watercourses;

(2) Proper locations well away from nearby watercourses will be used for temporary storage of materials (i.e. equipment, fill materials, chemicals and fuel) and temporary stockpile of construction debris and spoil, and these will be identified before commencement of works;

(3) To prevent muddy water entering nearby watercourses, work sites close to nearby watercourses will be isolated, using such items as sandbags or silt curtains with lead edge at bottom and properly supported props. Other protective measures will also be taken to ensure that no pollution or siltation occurs to the water gathering grounds of the works site;

(4) Stockpiling of construction materials, if necessary, will be properly covered and located away from nearby watercourses;

(5) Erection of temporary geotextile silt fences will be carried out around earth-moving works to trap any sediments and prevent them from entering watercourses;

(6) Construction debris and spoil will be covered and/or properly disposed as soon as possible to avoid being washed into nearby watercourses;

(7) Exposed soil will be covered as quickly as possible following formation works, followed, where appropriate, by covering with biodegradable geotextile blanket for erosion control purposes;

(8) Where appropriate, earth-bunding will be carried out of areas where soils have been disturbed or where vegetation has been cleared, to ensure that surface runoff will not move soils off-site;

(9) Construction effluent, site run-off and sewage will be probably collected and/or treated. Wastewater from any construction site will be minimised via the following in descending order: reuse, recycling and treatment;

(10) Proper locations for discharge outlets of wastewater treatment facilities well away from sensitive receivers will be identified and used;

(11) Silt traps will be installed at points where drainage from the site enters local watercourses;

(12) Appropriate sanitary facilities for on-site workers will be provided;

(13) The site boundary will be clearly marked and any works beyond the boundary strictly prohibited, and

(14) Regular water monitoring and site audit will be carried out at suitable points. If the monitoring and audit results show that pollution occurs, adequate measures including temporary cessation of works will be considered.

13.3.18 Accidental spillage events could potentially have a large impact on nearby habitats in view of their susceptibility to such pollution. Therefore, an emergency contingency plan should be established and implemented by the Project Proponent or its delegate prior to construction, and will be in place at times during the construction phase. The plan will include, but not be limited to, the following:

(1) Potential emergency situation;

(2) Chemicals or hazardous materials used on-site (and their location);

(3) Emergency response team;

(4) Emergency response procedures;

(5) List of emergency telephone hotlines;

(6) Locations and types of emergency response equipment, and

(7) Training plan and testing for effectiveness.

Measures to minimize light disturbance impact on wildlife groups

13.3.19 Measures are proposed to minimize the potential indirect light disturbance impact on the wildlife groups inhabiting the terrestrial habitats surrounding the Project Site, especially affecting nocturnal mammals if artificial lights are directed to these habitats. Mitigation measures include but not limited to the following:

(1) Installation of environmentally-friendly lighting system in open space areas, landscaping areas, and commercial and recreational buildings in the proposed development;

(2) Avoid pointing light sources directly toward terrestrial habitats (i.e. plantations, secondary woodlands, shrubby grassland and watercourses) within and adjacent to the Study Area;

(3) Appropriate engineering design of the artificially lit areas and lighting system and consider options to reduce light pollution on the ecosystems, such as a limit the duration of lighting at night (high levels of lighting may not be necessary in the middle of the night), change the intensity of lighting, avoid sky glow and limit the number of intensively lit buildings by green building design, change the spectral composition of lighting, and reduce lights infringing into areas that are not intended to be lit; and

(4) Careful design of any lighting systems proposed for public and commercial uses on or nearby the plantations and secondary woodlands within the Project Site, where high diversity of fauna were identified.

Landscape and Visual

13.3.20 Design measures with intention to minimise overall landscape and visual impact due to the development have been incorporated into the layout plans during planning and design stages. Measures to further avoid, as well as reduce and/or compensate the potential impacts during the construction and operation of the Project have all been considered. These proposed mitigation measures should be implemented as early as possible and many of these perform multiple functions. A summary of the proposed mitigation measures for the design, construction and operational phase of the Project are summarised in **Tables 13.2** to **13.4** below:

Table 13.2: Design phase mitigation measures

ID No.	Design Measures
DM1	Control of building heights to preserve the ridgelines of Tai Sheung Tok
DM2	Creation of extensive pedestrian linkages and open space network system connected to Kwun Tong Region.
DM3	Preservation of high landscape value, rehabilitation zone and enhancement on Quarry Berms
DM4	Incorporation of visual connections and breezeways through preserve of visual corridor and natural air flows
DM5	Proper disposition of building mass and avoidance of excessive height and bulk of site building and structure to minimise intrusive views to visual resources.
DM6	Proper design of road layout and streetscape, open space network in adjacent areas
DM7	Tree Preservation/ Removal/ Transplanted Application should be obtained prior to implementation at early design stage in accordance with **ETWB TCW No. 29/2004, 10/2013** and **LAO GN No. 7/2007**
DM8	Greening Provision in the early project planning stage in accordance with **DEVB TCW No. 2/2012** and **PNAP APP-152**
DM9	ACABAS submission upon completion of conceptual design should be accordance with **ETWB TCW No. 36/2004**
DM10	Maintenance responsibilities should be obtained agreement with concerned party in accordance with **ETWB TCW no. 2/2004**

Table 13.3: Construction phase mitigation measures

ID No.	Construction Phase Mitigation Measures	Funding / Implementation	Maintenance/ Management Agency
CM1[3]	All existing trees to be retained shall be carefully protected during construction.	CEDD	CEDD
CM2[2]	Tree Transplantation - Should removal of trees be unavoidable due to construction impacts, trees will be transplanted or felled. Detailed transplanting proposal will be submitted to relevant government departments for approval in accordance with **LAO GN No. 7/2007, *ETWB TCW No. 29/2004*** and ***10/2013***. Final locations of transplanted trees shall be agreed prior to commencement of the work.	CEDD	CEDD (Until handover to relevant government departments)

ID No.	Construction Phase Mitigation Measures	Funding / Implementation	Maintenance/ Management Agency
CM3[3]	Control of operation night-time glare with well-planned lighting operation strategy to minimize potential glare impact to adjacent VSRs.	CEDD	CEDD
CM4[3]	Erection of decorative screen hoarding.	CEDD	CEDD
CM5[1]	Minimise disturbance and limitation of run-off – temporary structures and construction works should be planned with care to minimise disturbance to adjacent landscape, vegetation, natural stream habitats.	CEDD	CEDD

Notes:

[1] The maintenance of the interim greening measures will be undertaken by contractor for the first 12-month establishment period. In the case that the site is still not allocated after the establishment period, CEDD would liaise with relevant government departments to agree on the subsequent maintenance agent of the interim greening measures. Contractor would be responsible for the maintenance of the interim greening measures before any agreement is made.

[2] The management and maintenance agencies of mitigation measures have been identified in accordance with ETWBTC 2/2004. The agreement and approval of the implementation, management and maintenance agencies of the Project will be sought from relevant parties during detailed design stage of the project. Contractor would be responsible for maintenance and management of trees, vegetation and the associated facilities (e.g. irrigation system) within the permanent site boundary. The maintenance matrix and responsible parties for trees outside the permanent site boundary are yet to be confirmed. To facilitate with the confirmation process, CEDD would be responsible for the maintenance works before any agreement is made.

[3] Mitigation measures refer to Good Site Practices.

Table 13.4: Operational phase mitigation measures

ID No.	Operation Phase Mitigation Measures	Funding / Implementation	Maintenance/ Management Agency
OM1[1], [2]	Compensatory tree planting should be incorporated into the proposed projects where trees are affected. (Along non-expressway public roads and within open spaces)	CEDD	LCSD (responsible parties for trees will be further discussed with government departments in accordance with Technical Circular ETWB TCW No. 10/2013 in detailed design stage)
OM1a[1], [2]	Compensation of wooded area	CEDD	LCSD (responsible parties for trees will be further discussed with government departments in accordance with Technical Circular ETWB TCW No. 10/2013 in detailed design stage)
OM2[1]	Tall buffer advance screen tree / shrub / climber planting, vertical green and green roof where appropriate should be incorporated to soften tall and hard engineering structures and facilities.	CEDD	Proposed maintenance/management party of the respective facilities: ArchSD /WSD/LSCD/ HyD

ID No.	Operation Phase Mitigation Measures	Funding / Implementation	Maintenance/ Management Agency
OM3	Sensitive streetscape design, which should be compatible with surrounding context, shall be incorporated along all new roads to reflect the new urban development in ARQ (Along non-expressway public roads outside country park)	CEDD	Proposed maintenance/management party of the respective facilities: LSCD (landscape softwork) HyD (landscape hardwork)
OM4	Structure, ornamental tree / shrub / climber planting should be provided along roadside amenity strips and central dividers to enhance the townscape quality, where practicable. (Along non-expressway public roads outside country park)	CEDD	LSCD
OM5	Sensitive and aesthetically pleasing design as regard to the form, height, material and finishes which should be visually unobtrusive, non-reflective compatible with surrounding context shall be incorporated to all buildings, noise barriers, engineering structures and associated infrastructure facilities.	CEDD	Proposed maintenance/management party of the respective facilities: ArchSD/WSD/LSCD/ HyD
OM6 [1], [2]	Landscape enhancement and restoration of the Quarry rock face and landscape berms.	CEDD	Proposed maintenance/management party of the respective slopes: LCSD/HyD/LandsD/HD (responsible parties will be further discussed with government departments in detailed design stage)
OM7[1], [2]	Landscape treatments on slope to enhance the landscape and visual amenity value of proposed man made slope	CEDD	Proposed maintenance/management party of the respective slopes: LCSD/HyD/LandsD/HD (responsible parties will be further discussed with government departments in detailed design stage)
OM8[1], [2], [3]	Reinstatement of disturbed area and vegetation to match adjacent area or to condition to suit future land use	CEDD	Original maintenance/management parties of the areas concerned
OM9 [1], [2], [3]	Trees and Shrubs Planting shall be incorporated to enhance the landscape and visual amenity value of planned open space such as Quarry Park, Summit Outlook, Gateway features, Children Playground, Civic Square, Green Promenade	CEDD	LCSD (responsible parties for trees will be further discussed with government departments in accordance with Technical Circular ETWB TCW No. 10/2013 in detailed design stage)

ID No.	Operation Phase Mitigation Measures	Funding / Implementation	Maintenance/ Management Agency
OM10	Environmentally-friendly lighting design and system, and a well-planned lighting operation strategy shall be incorporated into open space areas, landscaping areas, and commercial and recreational buildings in the proposed ARQ development to match with the ambient light condition. Specific requirements include: • Appropriate design of the mounting height and the direction of lighting fixtures to avoid the light sources directly pointing to adjacent VSRs within the Study Area; and • Adoption of appropriate lighting operation strategy to reduce lighting levels match with operation requirement, which includes but not limited to preventing use of unnecessary lighting, adjusting the intensity of lighting, avoiding sky glow and limiting the number of intensively lit buildings by green building design, changing the spectral composition of lighting and reducing lights infringing into areas that are not intended to be lit.	CEDD	Proposed maintenance/management party of the respective facilities: ArchSD/WSD/LSCD/ HyD

Notes:

[1] The maintenance of the interim greening measures will be undertaken by contractor for the first 12-month establishment period. In the case that the site is still not allocated after the establishment period, CEDD would liaise with relevant government departments to agree on the subsequent maintenance agent of the interim greening measures. Contractor would be responsible for the maintenance of the interim greening measures before any agreement is made.

[2] The management and maintenance agencies of mitigation measures have been identified in accordance with ETWBTC 2/2004. The agreement and approval of the implementation, management and maintenance agencies of the Project will be sought from relevant parties during detailed design stage of the project. Contractor would be responsible for maintenance and management of trees, vegetation and the associated facilities (e.g. irrigation system) within the permanent site boundary. The maintenance matrix and responsible parties for trees outside the permanent site boundary are yet to be confirmed. To facilitate with the confirmation process, CEDD would be responsible for the maintenance works before any agreement is made.

[3] Mitigation measures refer to Good Site Practices.