

9b. LANDSCAPE AND VISUAL IMPACT (ARTIFICIAL ISLAND NEAR SKC)

9b.1 Introduction

9b.1.1.1 EM&A for landscape and visual resources shall be undertaken by the contractor during the design, construction and operation phases of the Project. This section presents the requirements of the baseline review, and the monitoring of the design, implementation and maintenance of the landscape and visual mitigation measures during the design, construction and operation phases of the Project.

9b.2 Mitigation Measures

9b.2.1.1 The landscape and visual impact assessment of the EIA Study recommended a series of mitigation measures to ameliorate the landscape and visual impacts of the Project. The measures for both the construction and operation phases as recommended in the EIA Report are summarized in **Table 9b.1**.

Table 9b.1 Recommended Landscape and Visual Mitigation Measures

ID. No.	Landscape and Visual Mitigation Measure
<i>During Construction Phase</i>	
<i>Mitigation for both Landscape & Visual Impacts</i>	
MLVC-01	Grass-hydroseeded bare soil surface and stock pile area
MLVC-02	<u>Landscape Design</u> 1) Early planting using fast grow trees and tall shrubs at strategic locations within site as buffer to block view corridors to the site from the VSRs, and to locally screen haul roads, excavation works and site preparation works. 2) Use of tree species of dense tree crown to serve as visual barrier. 3) Hard and soft landscape treatment (e.g. trees and shrubs) of open areas within development to provide a background for the outdoor containers from open view, shade and shelter, and a green appearance from surrounding viewpoints. 4) Planting strip along the periphery of the project site. 5) Selected tree species suitable for the coastal condition.
MLVC-03	<u>Adoption of Natural Features of the Existing Shoreline</u> 1) Use of boulders in different sizes and with the similar textures of the existing rocky shores for the construction of breakwater and artificial shoreline in order to blend into the existing natural shoreline. 2) Use of cellular cofferdam together with the natural boulders to form a curvature shoreline for the reclamation area to echo with the natural shoreline of SKC.
MLVC-04	<u>Greening Design (Rooftop & Vertical Greening)</u> 1) Implementation of rooftop and vertical greening (vertical building envelope) along the periphery of each building block to increase the amenity value of the work, moderate temperature extremes and enhance building energy performance. The greening appearance of the building shall enhance its visual harmony with the natural surroundings as well as reduce the apparent visual mass of the structure. 2) Sufficient space between concrete enclosure and stack to minimize heat transfer. 3) Introduction of landscape decks at the stack to further enhance the overall natural and green concept unique for this site.

ID. No.	Landscape and Visual Mitigation Measure
Mitigation for Visual Impacts	
MVC-01	<u>Visual Mitigation and Aesthetic Design</u> 1) Use of natural materials with recessive color to minimize the bulkiness of the building. 2) Adoption of innovative aesthetic design to the chimney to minimize or visually mitigate the massing of the chimney so as to reduce its visual impact to the surroundings. 3) Color of the chimney in a gradual changing manner to match with the color of the sky. 4) Provision of observation deck for public enjoyment at the top of the chimney to diminish the feeling of chimney. 5) Provision of sky gardens between the two stacks to allow additional greening for enhancing the aesthetic quality. Maintenance access (elevator and staircase) from the ground floor to the sky gardens will be provided to allow maintenance of the sky gardens. 6) Integration of the visitor's walkway with different material façade design of incinerator plant to enhance the aesthetic quality.
MVC-02	Control of the security floodlight for construction areas at night to avoid excessive glare to the surrounding receiver.
MVC-03	Optimization of the construction sequence and construction programme to minimize the duration of impact.
MVC-04	Storage of the backfilling materials for site formation & construction materials / wastes on site at a maximum height of 2m, covered with an impermeable material of visually un-obtrusive material (in earth tone).
MVC-05	Reduction of the number of construction traffic at the site to practical minimum.
During Operation Phase	
Mitigation for both Landscape & Visual Impacts	
MLVO-01	<u>Planting Maintenance</u> Provision of proper planting maintenance and replacement of defective plant species on the new planting areas to enhance aesthetic and landscape quality.
Mitigation for Visual Impacts	
MVO-01	<u>Environmental Education Centre</u> Development of an Environmental Education Center, in which regular exhibitions and lectures to promote environmental awareness and waste reduction concept would be provided, as a part of the IWMF for the general public to alleviate negative public perceptions of the development.
MVO-02	<u>Control of Light</u> Control the numbers of lights and their intensity to a level that is good enough to meet the safety requirements at night but not excessive.
MVO-03	<u>Control of Operation Time</u> Minimization of the frequency of waste transportation to practical minimum (e.g. limit the reception of MSW from 8 am to 8 pm)

9b.2.1.2 The mitigation measures during construction shall be implemented from the commencement of the works and shall be applied for the whole duration of the construction period. The mitigation measures during operation will be included in the detailed design and shall be constructed or built up during the construction. Management and maintenance for all mitigation measures shall follow ETWB TCW No. 2/2004 Maintenance of Vegetation and Hard Landscape Features.

9b.3 Design Phase Audit

9b.3.1.1 The contractor shall incorporate the recommended mitigation measures in the detailed design and shall ensure the potential conflicts of the mitigation measures with the works under the Project and other interfacing projects are resolved prior to construction.

9b.3.1.2 Audits of the detailed design against the recommendations of the landscape and visual impact assessments within the EIA should be undertaken by a Registered Landscape Architect (RLA), who should ensure the fulfilment of the intentions of landscape mitigation measures, and a Registered Architect (RA), who should ensure the fulfilment of the intentions of visual mitigation measures.

9b.4 Baseline Review

9b.4.1.1 A baseline review shall be undertaken prior to the commencement of the construction works. The purposes of the review are as follows:-

- To check the status and any changes of the baseline Landscape Resources, Landscape Character areas and Visually Sensitive Receivers (VSRs) within and immediately adjacent to the works areas;
- To determine whether amendments in the design of the landscape and visual mitigation measures are required; and
- To recommend any necessary amendments to the design of the landscape and visual mitigation measures due to the above changes, if any.

9b.4.1.2 Any changes to the mitigation measures that may be recommended as a result of the baseline review shall be taken into account.

9b.5 Construction and Operation Phase Audit

9b.5.1.1 A specialist Landscape Sub-Contractor (on the approved Government list) shall be employed by the contractor for the implementation of landscape establishment works and the compensatory planting, as well as the subsequent maintenance operations during the one-year maintenance period which will be the first operational year of the Project.

9b.5.1.2 All landscape measures undertaken by both the contractor and the specialist Landscape Sub-Contractor during the construction phase and the first year of the operation phase shall be audited by a Registered Landscape Architect on a regular basis to ensure compliance with the intended aims of the measures and the effectiveness of the mitigation measures. Site inspections should be undertaken at least once every two weeks throughout the construction period, and once every month during the first operational year. After the one-year maintenance period, the landscape maintenance and monitoring shall be carried out by the Contractor.

9b.5.1.3 All visual measures undertaken by the contractor and the specialist Landscape Sub-Contractor during the construction phase and the first year of the operation phase shall be audited by a Registered Architect on a regular basis to ensure compliance with the intended aims of the measures and the effectiveness of the mitigation measures. Site inspections should be undertaken at least once every two weeks throughout the construction period, and once every month during the first operational year.

9b.5.1.4 If there is repeated non-compliance of the landscape and visual mitigation measures, EPD shall be notified as necessary.