10b. LANDSCAPE AND VISUAL IMPACT (ARTIFICIAL ISLAND NEAR SKC)

10b.1 Introduction

10b.1.1.1 This section presents the assessment of the landscape and visual impacts due to the construction and operation of the IWMF at an artificial island near Shek Kwu Chau (SKC).

10b.1.1.2 The photomontages and layouts provided in this report are based on a reference design prepared for this EIA study purpose. The actual design of the IWMF proposal will be subject to further refinement by the DBO contractor during the design stage.

10b.2 Description of Proposed Works

10b.2.1.1 The proposed works in the artificial island near SKC involve reclamation, construction and operation of the IWMF, which includes a thermal incineration plant, a sorting and recycling plant, and ancillary and supporting facilities.

10b.2.1.2 The key activities and issues of the proposed works related to the impacts on the landscape and visual aspects include:-

Construction Phase:

- Loss of sea due to reclamation to form an artificial island near SKC;
- Formation of an artificial island; and
- Presence of construction machinery and construction of facilities.

Operation Phase

- Presence of the built structures; and
- Presence of the waste transportation traffic to and from the IWMF.

10b.3 Environmental Legislation and Standards

10b.3.1.1 The following environmental legislation and standards have been considered:

- Country Parks Ordinance (Cap. 208);
- EIAO Guidance Note No. 8/2010 – sets up guidelines for preparation of Landscape and Visual Impact Assessment under EIAO;
- Environmental Impact Assessment Ordinance (EIAO) (Cap. 499), Annexes 10 and 18 of Environmental Impact Assessment Ordinance (EIAO) Technical Memorandum and;
- ETWB TCW No. 2/2004 Maintenance of Vegetation and Hard Landscape Features – sets out the government departmental responsibilities for maintenance of vegetation and hard landscape features;
- ETWB TCW No. 29/2004 Registration of Old and Valuable Trees and Guidelines for their Preservation – provides priority protection to the trees in the Register.

Furthermore, the Government has already put in place a comprehensive range of administrative and legislative measures to preserve trees on Government land;

- ETWB TCW No. 3/2006 Tree Preservation – defines and covers the reporting of unauthorized tree removal (i.e. felling or transplanting), on both private and unleased Government land;
- GEO Publication No. 1/2000 – "Technical Guidelines on Landscape Treatment and Bio-Engineering for Man-made Slope and Retaining Walls";
- Government General Regulation 740 – sets out restrictions on the preservation and felling of trees in Hong Kong;
- Hong Kong Planning Standards and Guidelines Chapter 4 and Chapter 11;
- Protection of Endangered Species of Animals and Plants Ordinance (Cap 586);
- The Forests and Countryside Ordinance (Cap. 96) – prohibits felling, cutting, burning or destroying of trees and growing plants in forests and plantations on government land. Its subsidiary regulations prohibit the picking, felling or possession of listed rare and protected plant species;
- The Forestry Regulations – makes under Section 3 of the Forests and Countryside Ordinance (Cap. 96) defining the list of protected species in Hong Kong;
- Technical Report of Landscape Value Mapping in Hong Kong by the Planning Department – establishes the essential landscape baseline information which provides a systematic reference framework to facilitate landscape assessment and broad environmental assessment of major projects at territorial level;
- Town Planning Ordinance and Town Planning (Amendment) Ordinance (Cap. 131); and
- WBTC No. 7/2002 Tree Planting in Public Works – affirms the advocated policy on tree planting which adopts a flexible and balanced approach in the planning and design of public works.

10b.4 Review of Planning and Development Control Framework

10b.4.1 Objectives

10b.4.1.1 A review of the existing and planned development framework for the proposed works and their surroundings has been conducted. It aims to:

- Identify issues for the neighbouring planned land uses;
- Identify the potential resources and sensitive receivers; and
- Ensure a high compatibility between the proposed works and the surroundings.

10b.4.2 Existence of Statutory Plans

10b.4.2.1 The approved South Lantau Coast OZP No.: S/SLC/16 (Approved – 2.11.2010) and Cheung Chau OZP No. S/I-CC/5 (Approved – 5.10.2010) have been examined. According to the OZPs, there is no specific zoning and land use for the proposed site.

10b.5 Baseline Study Methodology

10b.5.1 Introduction

10b.5.1.1 The landscape and visual impacts are assessed separately for the construction phase and the operation phase. The methodologies to assess landscape and visual impacts are described below.

10b.5.2 Landscape Baseline Study Methodology

10b.5.2.1 In accordance with the EIA Study Brief, a baseline survey of the existing landscape character areas (LCAs) and landscape resources (LRs) within 500m from the proposed works is undertaken by a combination of site inspections and desktop surveys. The proposed works within and adjacent to the study area are considered.

10b.5.2.2 The baseline survey forms the basis of the landscape context by describing broadly homogenous units of similar character. Environmental capital approach is adopted to classify the landscape into distinct LCAs based on distinct patterns or combinations of landscape resources / elements that occur consistently in a particular landscape. "Study of Landscape Value Mapping of Hong Kong" and "Map of Land Utilization in Hong Kong" by the Planning Department are also considered for the identification of LCAs and LRs. The landscape elements considered include:

- Local topography;
- Woodland and other vegetation types;
- Built form, land use and patterns of settlement;
- Scenic spots;
- Details of local materials;
- Natural and artificial coastlines;
- Prominent watercourses and water bodies;
- Cultural and religious identity, and
- Geological features.

Sensitivity of LCAs and LRs

10b.5.2.3 The individual landscape character areas (LCAs) / landscape resources (LRs) are described qualitatively and quantitatively. Their sensitivities are then evaluated and rated as low, medium or high based on the following factors:

- Quality, condition and value of landscape character / resources;
- Importance and rarity of special landscape resources;
- Ability of the landscape to accommodate change without compromising its essential nature;
- Significance of the change in local and regional context; and
- Maturity of the landscape.

10b.5.2.4 The rating of the sensitivity of the LCAs / LRs is assessed as follows:

High	Important components of a landscape of particularly distinctive character susceptible to relatively small changes.
Medium	A landscape of moderately valued characteristics reasonable tolerant to change.
Low	Relatively unimportant landscape, able to absorb significant change.

Magnitude of Change of LCAs and LRs

10b.5.2.5 Some common factors that are considered in deriving the magnitude of change in assessing landscape impacts are as follows:

- Compatibility of the Project with the landscape resource;
- Duration of impacts under the construction and operation phases;
- Scale of the development; and
- Reversibility of change.

10b.5.2.6 The rating of the magnitude of change of the LCAs / LRs is assessed based on the above criterion as follows:

Large	LCA or LR will suffer a large change due to the proposed works.
Intermediate	LCA or LR will suffer a moderate change due to the proposed works.
Small	LCA or LR will suffer a perceptible change due to the proposed works.
Negligible	LCA or LR will suffer no discernible change due to the proposed works.

10b.5.3 Visual Baseline Study Methodology

10b.5.3.1 The baseline survey of views towards the proposed development is carried out within the zone of visual influence.

10b.5.3.2 The visual envelope (zone of visual influence), according to EIAO GN No. 8/2010, is generally the view shed formed by natural/man-made features, such as ridgeline, building blocks. The visual envelope may contain areas that are fully visible, partly visible and non-visible from the proposed works. The visual sensitive receivers (VSRs) are those within the visual envelope whose views will be affected by the proposed works.

Sensitivity of VSRs

10b.5.3.3 The baseline survey describes and records the typical views from the VSRs and their characters and values within the visual envelope at low-level viewpoints (street level) and high-level viewpoints (hillside vantage points). Both present and future VSRs are considered.

10b.5.3.4 In the assessment of the sensitivity of the VSRs, the type of VSR is the key factor to be considered. Those VSRs who view the proposed works from their homes are considered to be highly sensitive as the attractiveness, or otherwise, of the view from their homes

would have a substantial effect on their perception of the quality and acceptability of their home environment and their general quality of life. Those VSRs who view the proposed works from their workplaces / schools are considered to be less sensitive in general as the attractiveness or otherwise of the view from their workplaces / schools would have a less important role in their perception of the quality of the working environment. The sensitivity also depends on whether the workplace is industrial, retail or commercial. For those VSRs who view the proposed works while engaging in outdoor leisure activities, their sensitivity depends on the type of leisure activity. For those VSRs who view the proposed works from public thoroughfares, their sensitivity depends on the speed of travel.

10b.5.3.5 The criteria for ranking the sensitivity of a VSR are:

- Type of representative receiver population;
- Value and quality of the existing view;
- Estimated number of representative receiver population;
- Availability and amenity of alternative views;
- Duration or frequency of views; and
- Degree of visibility.

10b.5.3.6 The rating of the sensitivity of the VSRs is assessed as follows:

High	Highly sensitive to any change in their viewing experience.
Medium	Moderately sensitivity to any change in their viewing experience.
Low	Only slightly sensitive to any change in their viewing experience.

Magnitude of Change to VSRs

10b.5.3.7 The common factors considered in deriving the magnitude of change in assessing the visual impacts are as follows:

- Compatibility of the Project with the surrounding landscape;
- Duration of impacts under the construction and operation phases;
- Scale of the development;
- Reversibility of change;
- Viewing distance; and
- Potential blockage of view.

10b.5.3.8 The rating of the magnitude of change to the VSRs is based on the above criterion assessed as follows:

Large	VSRs will suffer a large change due to the proposed works.
Intermediate	VSRs will suffer a moderate change due to the proposed works.
Small	VSRs will suffer a perceptible change due to the proposed works.
Negligible	VSRs will suffer no discernible change due to the proposed works.

10b.5.4 Impact Significance Threshold Assessment Methodology

Impact Significance Threshold before Mitigation

10b.5.4.1 The assessment of the potential landscape / visual impacts during the construction and operation phases with or without the proposed works is created by synthesizing the "Sensitivity" and "Magnitude of Change" for the LCAs/LRs/VSRs according to the Matrix of Impact Significance Threshold before Mitigation in **Table 10b.1**.

Table 10b.1 Matrix for Impact Significance Threshold – Combination and Relationship between Sensitivity and Magnitude of Change

Magnitude of Change due to the Proposed Works		**Sensitivity of LR/LCA/VSR**		
		Low	**Medium**	**High**
	Large	*Moderate*	*Moderate / Substantial*	*Substantial*
	Intermediate	*Slight / Moderate*	*Moderate*	*Moderate / Substantial*
	Small	*Slight*	*Slight / Moderate*	*Moderate*
	Negligible	*Insubstantial*	*Insubstantial*	*Insubstantial*

Degree of Impact Significance Threshold before Mitigation

10b.5.4.2 The degree of significance is categorized into four thresholds depending on the combination below:

Substantial	Adverse / beneficial impact where the proposed works would cause significant deterioration / improvement in the existing landscape / visual quality.
Moderate	Adverse / beneficial impact where the proposed works would cause noticeable deterioration / improvement in the existing landscape / visual quality.
Slight	Adverse / beneficial impact where the proposed works would cause barely perceptible deterioration / improvement in the existing landscape / visual quality.
Insubstantial	No discernible change in the existing landscape / visual quality.

10b.5.5 Residual Impacts Assessment Methodology

10b.5.5.1 Residual impacts are those impacts remaining after the proposed mitigation measures have been implemented. The planting mitigation measures are deemed to have reached a level of maturity to perform their original design objectives 10 to 15 years after the implementation of the mitigation measures.

10b.5.5.2 The level of residual impact is derived from the magnitude of change which the proposed works will cause to the existing view or landscape character and the ability of the LRs/LCAs/VSRs to tolerate change, i.e. the quality and sensitivity of the view or landscape character, taking into account the beneficial effects of the proposed mitigation measures. The significance threshold is derived from the matrix shown in **Table 10b.1**.

10b.5.5.3 Impacts ranged from "Substantial" to "Moderate" are considered as non-ideal situations, and mitigation measures are recommended. Measures are also considered for the purpose of potential visual enhancement.

10b.5.6 Photomontage Illustration for Selected Views

10b.5.6.1 Representative views from the VSRs are selected to illustrate the effectiveness of the proposed mitigation measures and the residual impacts of the proposed works in both short and long term. For each selected VSR, photomontages are prepared for:

- Existing baseline condition (Day 1 of Construction Phase)
- Development without mitigation
- Development with mitigation (Day 1 of Operation Phase)
- Development with mitigation (10 years of Operation Phase)

10b.5.7 Overall Result of Assessment

10b.5.7.1 In accordance with Annex 10 of the EIAO TM, an overall assessment is made for the proposed works based on the residual landscape and visual impacts as follows:

Beneficial	The proposed works will complement the landscape and visual character of its setting, follow the relevant planning objectives, and improve overall and visual quality.
Acceptable	There will be no significant effects on the landscape, no significant visual effects, and no interference with the key views due to the proposed works.
Acceptable with Mitigation Measures	There will be some adverse effects due to the proposed works, but the adverse effects can be eliminated, reduced or offset to a large extent by the proposed mitigation measures.
Unacceptable	There will be the adverse effects that are considered too excessive and are unable to mitigate practically.
Undetermined	Significant adverse effects are likely, but the extent to which they may occur or may be mitigated cannot be determined from the study. Further detailed study will be required for the specific effects in question.

10b.6 Baseline study

10b.6.1 Identification of Landscape Resources (LRs)

10b.6.1.1 The details and locations of LRs are shown in **Table 10b.2** and **Figure 10b.1** respectively. The photos showing the LRs are presented in **Figure 10b.2**.

Table 10b.2 Landscape Resources within Study Area

I.D. no.	Landscape Resources (LRs)	Quantity (ha) (Within Project Site / Within Study Area)	Description
LR1	Hillside & Vegetated Slope	41.1	• This LR refers to the natural slopes and shrubland with vegetation of Shek Kwu Chau (SKC). There are some natural sea cliffs around the island. • The hillside slopes are dominated by mature woodland and shrubland. Some of the commonly recorded species include tree species *Bridelia tomentosa*, *Celtis sinensis*, and *Macaranga tanarius*; shrub species *Ilex asprella, Psychotria asiatica and Litsea glutinosa*; herb species *Bidens alba*, and *Dicranopteris pedata*; and climber species *Bauhinia championii*. No rare plant species nor registered Old and Valuable Trees are recorded in this LR. • Exposed natural rocks are found to be scattered within this LR. • Plantation within the study area is mainly found on modified slopes surrounding the football court, near developed habitat, and along roadsides. These areas are dominated by commonly planted exotic tree species *Acacia confusa* and *Delonix regia*. Other species that are also commonly recorded include tree species *Mallotus apelta*, and *Mallotus paniculatus*; shrub species *Litsea glutinosa*; and climber species *Pueraria spp*.
LR2	Shoreline	2.1	• This LR is characterized by the natural rocky shore. The shore is composed of large boulders in various forms with wave erosion features. The shore is similar to other typical exposed rocky shores in Hong Kong. The only disturbed sections of the shoreline are where the pier is constructed at the east side of the island and the saltwater pump house at the southwest side of the island. • With reference to Geological Map of Hong Kong (CEDD), it is noted that the area of the existing shoreline is classified as Chi Ma Wan Granite which is the same as those in South Lantau Island and Cheung Chau. The existing natural rocks are commonly found in Hong Kong. As this area is not within the coverage of Hong Kong Geopark with reference to "Knowing Hong Kong Gopark (AFCD)", it does not provide valuable educational tourism and leisure use currently.
LR3	Seawater	137.0	• This LR refers to the sea area adjacent to SKC. • The proposed reclamation area is about 10 – 40 m away from the coastline. • The seabed is habitats for coral communities.

I.D. no.	Landscape Resources (LRs)	Quantity (ha) (Within Project Site / Within Study Area)	Description
LR4	Developed Area	2.1	• This LR refers to a few 1 or 2-storey buildings, footpaths and some concrete platforms served as a treatment and rehabilitation centre, currently managed by the Society for the Aid and Rehabilitation of Drug Abusers (SARDA). • The buildings include the Administration Building, Assembly Hall, Recovery House, Office Block, Mei House, Ming House, Courtyard Complex, and some other low-rise structures scattered in a rural setting. • The Courtyard Complex is situated in the area of the administrative building cluster at the southwest part of SKC. This Grade 3 historic building was built in a Roman Architectural Style with a fountain, a recreation pool with the presence of statues like a Roman Bath and a garden surrounded by colonnade. Concrete and stone are the major construction materials. • Gardens with vegetation and outdoor seatings are present around the buildings for the enjoyment of rehabilitators and staff. There is also a pond, which is used as a reservoir by the residence of the island, located to the northeast of the Administration Building. • Some of the commonly recorded species found in this LR include shrub species *Duranta erecta* and *Hibiscus rosa-sinensis*; and herb species *Wedelia trilobata* and *Oxalis corniculata*. Other recorded tree species include *Sapindus saponaria* and *Ficus elastica*. No rare plant species nor registered Old and Valuable Trees are recorded in this LR.

10b.6.2 Identification of Landscape Character Areas (LCAs)

10b.6.2.1 The details and locations of LCAs are shown **Table 10b.3** and **Figure 10b.3** respectively. The photos showing the LCAs are presented in **Figure 10b.4**.

Table 10b.3 Landscape Character Areas within Study Area

I.D. no.	Landscape Character Areas (LCAs)	Quantity (ha) (Within Project Site / Within Study Area)	Description
LCA1	Island Landscape	45.3	• This LCA is characterized by its natural slopes, shrubland with vegetation, and occasional natural sea cliffs around the island. There are some developed areas with facilities such as footpath, low-rise buildings, gardens, etc. that support the operation of the rehabilitation and treatment centre by SARDA. The developments are in a rural setting. • The hillside slopes are dominated by mature woodland and shrubland. • Exposed natural rocks are found to be scattered within this LR. • Plantation within the study area is mainly found on modified slopes surrounding the football court, near developed habitat, and along roadsides. • Rocky shores with large boulders are found at all sides of the island surrounded by seawater. • SKC is classified as High Terrestrial LCA Value according to the Landscape Value Map of Hong Kong.
LCA2	Sea	137.0	• This LCA refers to the sea area adjacent to SKC. • Sea is classified as high landscape value in Marine LCA value according to Landscape Value Map of Hong Kong. • The seabed is habitats for coral communities.

10b.6.3 Identification of Visual Sensitive Receivers

10b.6.3.1 The details and locations of VSRs are shown in **Table 10b.4** and **Figures 10b.5 and 10b.6** respectively. The photos showing the VSRs are presented in **Figures 10b.7 to 10b.9**.

Table 10b.4 Visual Sensitive Receivers within Visual Envelope

I.D. no.	Visual Sensitive Receivers (VSRs)	Type of VSRs	Number of VSRs	Description
VSR1	Footpath along the Hill	Residential / Occupational	Few	• The VSR refers to the staff and rehabilitators of the SARDA Shek Kwu Chau Rehabilitation Centre. • This footpath is the main circulation linking up different facilities in SKC. SKC is a restricted area and permission is required to visit the island. Therefore, this footpath is not accessible to the general public. • The full view of the project site can be seen by this VSR.
VSR2	Shun House	Residential / Occupational	Few	• This VSR refers to the residents of Shun House, which is located at the southern part of SKC. • This building is a temporary accommodation of some rehabilitators, who stay in SARDA for treatment programme. The population of this building is low. • While some of the proposed works will be screened off by the existing vegetation, a large portion of the buildings as well as the 150m tall chimney in the project site will be visible to this VSR.
VSR3	Administration and Residential Building Cluster	Residential / Occupational	Few	• The VSR refers to the staff and rehabilitators of SARDA in the administration block cluster area. • The administration block cluster area comprises the Administration Building, Assembly Hall, Recovery House, Office Block, Mei House, Ming House and Courtyard Complex. The Courtyard Complex, which was built in a Roman Architectural Style, is a Grade 3 historic building. • While the VSR's view of the proposed work at the ground level would be screened off by the existing trees, the full view of the proposed work will be seen by the VSR at the second floor of some buildings (e.g. Recovery House).
VSR4	Sea	Sea Traveller	Few	• This VSR refers to the sea travellers travelling to the south of the project site. • Most of the sea travellers travel to the South Lantau from the South Sea, while some sea travellers travel to the Siu A Chau and Tai A Chau, which are located to the west of SKC. The views from this VSR are of a transient nature. In normal situations, ships do not sail close to the project site. • Owing to the large extent and exposed nature of the proposed site, the full view of proposed works will be visible by the VSR in a significant way, especially the presence of the high-rise stack.

I.D. no.	Visual Sensitive Receivers (VSRs)	Type of VSRs	Number of VSRs	Description
VSR5	Cheung Sha, Lantau Island	Visitors / Residential	Medium	• This VSR refers to the people who visit or reside in Cheung Sha. • The project site is located about 6km southeast to this VSR. • A portion of the buildings in the project site will be screened off by SKC. Therefore, the proposed works will be partially visible to the VSR.
VSR6	Cheung Po Tsai Cave, Cheung Chau	Visitors	Medium	• This VSR refers to the people who visit the Cheung Po Tsai Cave, Cheung Chau. • The project site is located about 3.5km southwest to this VSR. • While the buildings in the project site will be screened off by SKC, the top part of the chimney can be seen from the VSR.
VSR7	Cheung Chau Ferry Pier	Visitors / Residential	Many	• This VSR refers to the people in Cheung Chau Ferry Pier. They are mainly visitors or residents of Cheung Chau. • The project site is located about 4km southwest to this VSR. • While the buildings in the project site will be screened off by SKC, the top part of the chimney can be seen from the VSR.
VSR8	Pui O Beach	Recreational Engager / Visitors	Medium	• This VSR refers to the people who visit or enjoy recreational activities in the Pui O Beach. • The project site is located about 6km south to this VSR. • For the VSR at the eastern part of the beach, the buildings in the project site will be screened off by SKC. As the VSR moves towards the western part of the beach, a portion of the proposed works will be visible.
VSR9	Lantau Trail Stage 2	Hiker	Few	• This VSR refers to the hikers walking along the Lantau Trail Stage 2 between Nam Shan and Pak Kung Au. • Lantau Trail Stage 2 is about 6.5 km long. The project site is located about 8km to the south or southeast of this VSR. • While the buildings in the project site will be screened off by SKC, the top part of the chimney can be seen at certain sections of Lantau Trail Stage 2.
VSR10	Lantau Trail Stage 3	Hiker	Few	• This VSR refers to the hikers walking along the Lantau Trail Stage 3 between Ngong Ping and Pak Kung Au. • Lantau Trail Stage 3 is about 4.5 km long. Lantau Peak is located at this section of Lantau Trail. The project site is located about 8km to the southeast of this VSR. • At certain sections of Lantau Trail Stage 3, part of the project site can be seen.

I.D. no.	Visual Sensitive Receivers (VSRs)	Type of VSRs	Number of VSRs	Description
VSR11	Tong Fuk Beach	Recreational Engager / Visitors	Medium	• This VSR refers to the people who visit or enjoy recreational activities in the Tong Fuk Beach. • The project site is located about 7km southeast to this VSR. • Almost the full view of proposed works will be visible by the VSR.
VSR12	Sea Course between Hong Kong and Macau/ Zhongshan	Travellers	Medium	• This VSR refers to the sea travellers travelling to the northwest of the project site. They mainly travel to/from Macau/Zhongshan, which are located to the west of SKC. • The views from this VSR are of a transient nature. • The distance from the VSR to the project site varies, with a minimum distance of approximately 2.5km. • The full view of proposed works will be visible by the VSR.
VSR13	Chi Ma Wan Trail - Yi Long Wan	Hiker	Few	• This VSR refers to the hikers at the section of Chi Ma Wan Trail near Sea Ranch and Yi Long Wan. • The project site is located about 3.5km south to this VSR. • The buildings in the project site will be screened off by SKC. Only the tip of the chimney can be barely seen at certain spots of the trail.
VSR14	Tai Long Wan, Chi Ma Wan Peninsula	Visitors / Residential	Few	• This VSR refers to the people who visit Tai Long Wan in Chi Ma Wan Peninsula, and the few residents in the nearby village, Tai Long. • The project site is located about 3.5km south to this VSR. • While the buildings in the project site will be screened off by SKC, the top part of the chimney will be visible to this VSR.

10b.7 Sources of Landscape and Visual Impact

10b.7.1 Sources of Landscape Impact

10b.7.1.1 The sources of landscape impact during the construction phase are shown in **Table 10b.5**.

Table 10b.5 Sources of Landscape Impact during Construction Phase

Code	Sources of Landscape Impact during Construction Phase
LC-01	Construction of Cellular Cofferdam for Reclamation • Cellular cofferdam will be constructed to confine the reclamation area. Cellular cofferdam is a self-supporting gravity structures consisted of circular cells constructed using straight web sheet piles. The piles are interlocked and driven below the seabed level to form closed cells (or circular cells) which are then filled with filling materials. • The cellular cofferdam surrounding the reclamation area would be about +5mPD high to avoid flooding of the site.
LC-02	Reclamation • Site filling for reclamation to form about 11.8 hectares of land will be carried out. The reclamation will be formed with filling materials supported on the in-situ marine deposits with suitable geotechnical ground treatment (such as surcharge loading, installation of vertical band drains, etc.).
LC-03	Construction of Breakwater • Breakwaters will be provided to protect the water basin. To minimize dredging and filling activities and the associated environmental impacts, circular cell breakwater at a height of about +9mPD is proposed.
LC-04	Construction of Berth • The berth area extended from the seawall at the northwest side of the reclaimed area will be formed by a piled deck structure with precast slab. Tubular piles would be employed to form the foundation of the berth. Non-percussive bore piling method would be adopted for the installation of tubular piles.
LC-05	Foundation Works on Reclaimed Land • Foundation works (spread footing as recommended) would be employed on the reclaimed land for the project site.
LC-06	• Construction of incinerators, boilers and 150m high chimney.
LC-07	• Construction of ancillary facilities such as administration building & Environmental Education Centre, steam turbine, refuse bunker, wastewater treatment plant, fly ash silos and treatment facilities, air compressor station, air cooled condenser, oil pump room, etc.
LC-08	• Underground excavation and connection for installation of utilities, including waterpipes, plumbing, drains, cables, etc. (submarine cables laid across the Adamasta Channel from the artificial island near SKC to Cheung Sha, South Lantau) for the IWMF operation.
LC-09	• Temporary site access, site cabins and heavy machinery on the reclamation area.

10b.7.1.2 The sources of landscape impact during the operation phase are shown in **Table 10b.6**.

Table 10b.6 Sources of Landscape Impact during Operation Phase

Code	Sources of Landscape Impact during Operation Phase
LO-01	• Completed incineration plant & chimney.
LO-02	• Completed breakwater, ancillary buildings such as new administration building & Environmental Education Centre and elevated bridge for visitors.
LO-03	• Completed chemical storage building and chemical dosing area.
LO-04	• Completed wastewater treatment plant and desalination plant.

10b.7.2 Sources of Visual Impacts

10b.7.2.1 The sources of visual impact during the construction phase are shown in **Table 10b.7**.

Table 10b.7 Sources of Visual Impact during Construction Phase

Code	Sources of Visual Impact during Construction Phase
VC-01	• Visual obstruction by temporary and permanent construction plants and structures. • Visual obstruction by construction activities and traffic within the project site. • Visual obstruction by loss of open sea view.
VC-02	• Visual quality affected due to site formation and bare soil surface.
VC-03	• Visual quality affected due to glare generated by after-dark lighting and welding.
VC-04	• Visual quality affected by dust generated by construction activities and traffic.

10b.7.2.2 The sources of visual impact during the operation phase are shown in **Table 10b.8**.

Table 10b.8 Sources of Visual Impact during Operation Phase

Code	Sources of Visual Impact during Operation Phase
VO-01	• Visual quality affected by the completed 150m high chimney, incinerators and boilers.
VO-02	• Visual quality affected by the completed ancillary buildings such as administration building & Environmental Education Centre, steam turbine, refuse bunker, wastewater treatment plant, fly ash silos and treatment facilities, air compressor station, air cooled condenser, oil pump room, etc.
VO-03	• 2 layers of waste containers (about 350 nos.) occupying about 0.25 ha space on the berth at north-western side of project site, and one shore-based crane for transportation of containers located at the south of the berth area.
VO-04	• Visual quality affected by lighting provision of the development during operation at night.
VO-05	• Visual obstruction of sea view.
VO-06	• Waste transportation vessel to/from the project site.

10b.8 Landscape Impact Assessment (Before Mitigation)

10b.8.1 Sensitivity of Landscape Resources and Landscape Character Areas

10b.8.1.1 Based on the findings of the baseline study, the "Sensitivity" of the LRs and LCAs is assessed and listed in **Table 10b.9**.

Table 10b.9 Sensitivity of Identified Landscape Resources and Landscape Character Areas

Landscape Resources/ Landscape Character Areas	**Ability to Accommodate Change** (Low, Medium, High)	**Importance** (local, regional, national, global)	**Rarity** (Low, Medium, High)	**Quality of Resource** (Low, Medium, High)	**Maturity of Resource** (Mature, Pre-mature)	**Sensitivity** (Low, Medium, High)
Landscape Resources						
LR1 Hillside & Vegetated Slope	• High naturalness of mature woodland and shrubland and trees dominated by the native / exotic species. The landscape quality is high. • High floral diversity (114 species). • Some of the commonly recorded species include tree species *Bridelia tomentosa*, *Celtis sinensis*, and *Macaranga tanarius*; shrub species *Ilex asprella*, *Psychotria asiatica* and *Litsea glutinosa*; herb species *Bidens alba*, and *Dicranopteris pedata*; and climber species *Bauhinia championii*. No rare plant species nor registered Old and Valuable Trees are recorded in this LR.					High
	Medium	Local	Medium	High	Mature	
LR2 Shoreline	• Natural rocky shoreline consists of boulders featured by wave erosion. • The shore is similar to other typical exposed rocky shores in Hong Kong without special geological value. However, the quality of resource is considered high in view of its naturalness and its relationship with the seawater.					High
	Low	Local	Low	High	Mature	
LR3 Seawater	• Due to large quantity of seawater resource in local area, this LR accounts for an insignificant portion of the nearby resource and is not considered rare. • The relatively small scale of this LR, in comparison to the large sea area, makes it capable to accommodate change without compromising its essential nature. • Landscape quality and value is considered high.					High
	Medium	Local	Low	High	N/A	
LR4 Developed Area	• Low-rise structures made of concrete and stone are scattered in this rural setting. • The structures are subject to modification to suit the future operation of the rehabilitation and treatment centre. The landscape value is considered medium. • An exception would be the Courtyard Complex which is a Grade 3 historic building. It possesses a pond and fountain surrounded by colonnade which is considered high in rarity. • Low floral diversity (14 species) and no rare plant species are recorded.					High
	Medium	Local	High	Medium	Mature	

Landscape Resources/ Landscape Character Areas	**Ability to Accommodate Change** (Low, Medium, High)	**Importance** (local, regional, national, global)	**Rarity** (Low, Medium, High)	**Quality of Resource** (Low, Medium, High)	**Maturity of Resource** (Mature, Pre-mature)	**Sensitivity** (Low, Medium, High)
Landscape Character Areas						
LCA1 Island Landscape	• Majority of this LCA is characterized by its natural slopes of mature woodland and shrubland with vegetation. Natural sea cliffs exist occasionally around the island. Rocky shores with large boulders are found at all sides of the island surrounded by seawater. • There are some developed areas including low-rise buildings, footpaths, etc. scattered on the island that support the operation of the rehabilitation and treatment centre by the Society for the Aid and Rehabilitation of Drug Abusers (SARDA). • High Floral diversity (114 species). • No rare plant species is recorded. • SKC is classified as High Terrestrial LCA Value according to the Landscape Value Map of Hong Kong. • Given the high naturalness of island landscape, the landscape quality is high.					High
	Medium	Local	Medium	High	Mature	
LCA2 Sea	• Due to large quantity of seawater resource in local area, this LCA accounts for an insignificant portion of the nearby resource and is not considered rare. • The relatively small scale of this LCA, in comparison to the large sea area, makes it capable to accommodate change without compromising its essential nature. • Sea is classified as high landscape value in Marine LCA value according to Landscape Value Map of Hong Kong. • Landscape quality and value is considered high.					High
	Medium	Local	Low	High	Mature	

10b.8.2 Magnitude of Change of Landscape Resources and Landscape Character Areas

10b.8.2.1 The "Magnitude of Change" of the LRs and LCAs is assessed and listed in **Table 10b.10**.

Table 10b.10 Magnitude of Change of Identified Landscape Resources and Landscape Character Areas

Landscape Resources/ Landscape Character Areas		Physical Extent & Landscape Context of Impact	Magnitude of Change (Negligible, Small, Intermediate, Large)	
			Construction	Operation
Landscape Resources				
LR1	Hillside & Vegetated Slope	Source of Impact • Located outside works area; no direct/physical impact. Physical Extent • 0 ha (0% out of 41.1 ha) Compatibility with Landscape Resource • The IWMF includes primarily man-made structures which would be incompatible with this LR in nature. Duration of Impact • N/A Reversibility of Change • N/A • As this LR is located outside the project site, the magnitude of change is considered negligible even though the IWMF is incompatible with this LR.	Negligible	Negligible
LR2	Shoreline	Source of Impact • To avoid direct impact to the natural shoreline, the existing coral at the coast and the terrestrial ecology of SKC, the reclamation area will not be connected to SKC. The coast of SKC and the reclamation area will be separated by a water channel (about 10 – 40 m in width and 350 m in length). The deeper side of the channel would be about 9m deep. Therefore, direct impact to the shoreline is not anticipated. • While the current speed at the coast may increase after the formation of the water channel, the risk of erosion in the channel is unlikely as the seabed near the southwestern shore of SKC consists mainly of hard material, which is not prone to erosion. Indirect impact to the shoreline is not anticipated. Physical Extent • 0 ha (0% out of 2.1 ha) Compatibility with Landscape Resource • The IWMF includes primarily man-made structures which would be incompatible with this LR in nature. Duration of Impact • N/A Reversibility of Change • N/A • As this LR is located outside the project site, the magnitude of change is considered negligible even though the IWMF is incompatible with this LR.	Negligible	Negligible

Landscape Resources/ Landscape Character Areas		Physical Extent & Landscape Context of Impact	Magnitude of Change (Negligible, Small, Intermediate, Large)	
			Construction	**Operation**
LR3	Seawater	Source of Impact (Construction Phase) • LC-01, LC-02, LC-03, LC-04, LC-05, LC-06, LC-07, LC-08, LC-09 Source of Impact (Operation Phase) • LO-01, LO-02, LO-03, LO-04 Physical Extent • 15.9 ha (11.6% out of 137 ha) • Comparing with the overall size of the LR (137 ha), the portion of the LR occupied for reclamation and breakwater construction is relatively small. Compatibility with Landscape Resource • The IWMF includes primarily man-made structures which would be incompatible with this LR in nature. Duration of Impact • The duration of impact imposed during reclamation, construction of cofferdam and breakwater, construction of buildings and roads, and equipment installation will be approximately 5.5 years, while the duration of impact during the operation phase will be long. Reversibility of Change • The impact is considered permanent and irreversible.	Large	Large
LR4	Developed Area	Source of Impact • Located outside works area; no direct/physical impact. Physical Extent • 0 ha (0% out of 2.1 ha) Compatibility with Landscape Resource • The IWMF includes primarily industrial facilities which would be incompatible with this LR in nature. • Duration of Impact • N/A Reversibility of Change • N/A • As this LR is located outside the project site, the magnitude of change is considered negligible even though the IWMF is incompatible with this LR.	Negligible	Negligible

Landscape Resources/ Landscape Character Areas		Physical Extent & Landscape Context of Impact	Magnitude of Change (Negligible, Small, Intermediate, Large)	
			Construction	Operation
Landscape Character Areas				
LCA1	Island Landscape	Source of Impact • Located outside works area; no direct/physical impact. Physical Extent • 0 ha (0% out of 45.3 ha) Compatibility with Landscape Resource • The IWMF includes primarily man-made structures which would be incompatible with this LCA in nature. • While the current speed at the coast may increase after the formation of the water channel, the risk of erosion in the channel is unlikely as the seabed near the southwestern shore of SKC consists mainly of hard material, which is not prone to erosion. Indirect impact to the shoreline is not anticipated. Duration of Impact • N/A Reversibility of Change • N/A • Although no direct/physical impact to the LCA1 will be caused by the proposed works, the incompatibility of the proposed works with LCA1 would cause some indirect impact to LCA1. Therefore, small change to LCA1 would be anticipated.	Small	Small
LCA2	Sea	Source of Impact (Construction Phase) • LC-01, LC-02, LC-03, LC-04, LC-05, LC-06, LC-07, LC-08, LC-09 Source of Impact (Operation Phase) • LO-01, LO-02, LO-03, LO-04 Physical Extent • 15.9 ha (11.6% out of 137 ha) • Comparing with the overall size of the LCA (137 ha), the portion of the LR occupied for reclamation and breakwater construction is relatively small. Compatibility with Landscape Resource • The IWMF includes primarily man-made structures which would be incompatible with this LR in nature. Duration of Impact • The duration of impact imposed during reclamation, construction of cofferdam and breakwater, construction of buildings and roads, and equipment installation will be approximately 5.5 years, while the duration of impact during the operation phase will be long. Reversibility of Change • The impact is considered permanent and irreversible.	Large	Large

10b.8.3 Significance Threshold of Landscape Resources and Landscape Character Areas

10b.8.3.1 Based on the "Sensitivity" as listed in **Table 10b.9** and "Magnitude of Change" as listed in **Table 10b.10**, the degree of significance for LRs and LCAs is identified according to the matrix **Table 10b.1**. The Significance Threshold of identified LRs and LCAs before mitigation is assessed and listed in **Table 10b.11**.

Table 10b.11 Significance Threshold of Identified Landscape Resources and Landscape Character Areas before Mitigation

	Landscape Resources/ Landscape Character Areas	Sensitivity	Source of Impact		Magnitude of Change Before Mitigation		Impact Significance Threshold Before Mitigation	
			Construction	Operation	Construction	Operation	Construction	Operation
Landscape Resources								
LR1	Hillside & Vegetated Slope	High	Nil	Nil	Negligible	Negligible	Insubstantial	Insubstantial
LR2	Shoreline	High	Nil	Nil	Negligible	Negligible	Insubstantial	Insubstantial
LR3	Seawater	High	LC-01, LC-02, LC-03, LC-04, LC-05, LC-06, LC-07, LC-08, LC-09	LO-01, LO-02, LO-03, LO-04	Large	Large	Substantial	Substantial
LR4	Developed Area	High	Nil	Nil	Negligible	Negligible	Insubstantial	Insubstantial
Landscape Character Area								
LCA1	Island Landscape	High	LC-01, LC-02, LC-03, LC-04, LC-05, LC-06, LC-07, LC-08, LC-09	LO-01, LO-02, LO-03, LO-04	Small	Small	Moderate	Moderate
LCA2	Sea	High	LC-01, LC-02, LC-03, LC-04, LC-05, LC-06, LC-07, LC-08, LC-09	LO-01, LO-02, LO-03, LO-04	Large	Large	Substantial	Substantial

10b.9 Visual Impact Assessment

10b.9.1 Sensitivity of Visual Sensitive Receivers

10b.9.1.1 Based on the findings of the baseline study, the characteristics and "Sensitivity" of the VSRs are summarized in **Table 10b.12**.

Table 10b.12 Sensitivity of Identified Visual Sensitive Receivers

I.D. no.	**VSRs**	**Type of VSRs**	**No. of Individuals** (Many, Medium, Few, Very Few)	**Quality of Existing View** (Good, Fair, Poor)	**Availability of Alternative Views** (Yes/No)	**Degree of Visibility** (Full, Partial, Glimpse)	**Frequency of View** (Very Frequent, Frequent, Occasional, Rare)	**Sensitivity** (Low, Medium, High)
VSR1	• The VSR consists of mainly the staff and rehabilitators of the SARDA Shek Kwu Chau Rehabilitation Centre. This footpath is the main circulation linking up different facilities in SKC. • SKC is a restricted area and permission is required to visit the island. Therefore, this footpath is not accessible to the general public. • The full view of the project site can be seen by this VSR. • Most of the proposed works would be seen from this VSR especially the high-rise stack. • There are alternative views with high amenity value to this VSR.							Medium
	Footpath along the Hill	Residential / Occupational	Few	Good	Yes	Full	Occasional	
VSR2	• This VSR refers to the residents of Shun House, which is located at the southern part of SKC. • This building is a temporary accommodation of some rehabilitators, who stay in SARDA for treatment programme. The population of this building is low. • While some of the proposed works will be screened off by the existing vegetation, a large portion of the buildings as well as the 150m tall chimney in the project site will be visible to this VSR. • There are alternative views with high amenity value to this VSR.							Medium
	Shun House	Residential / Occupational	Few	Good	Yes	Partial	Occasional	

I.D. no.	VSRs	Type of VSRs	No. of Individuals (Many, Medium, Few, Very Few)	Quality of Existing View (Good, Fair, Poor)	Availability of Alternative Views (Yes/No)	Degree of Visibility (Full, Partial, Glimpse)	Frequency of View (Very Frequent, Frequent, Occasional, Rare)	Sensitivity (Low, Medium, High)
VSR3	• The VSR refers to mainly the staff and rehabilitators of SARDA in the administration block cluster area, which comprises the Administration Building, Assembly Hall, Recovery House, Office Block, Mei House, Ming House and Courtyard Complex. The Courtyard Complex, which was built in a Roman Architectural Style, is a Grade 3 historic building. • While the VSR's view of the proposed works at the ground level would be screened off by the existing trees, the full view of the proposed works will be seen by the VSR at the second floor of some buildings (e.g. Recovery House). • The administration and residential building cluster is located on elevated terrain while the proposed project site is situated by the southern coast of the island close to sea level. Direct impact on the administration and residential building cluster is therefore not anticipated due to their elevation difference. • For the Courtyard Complex (a Grade 3 historic building), due to the elevation difference and the presence of Recovery House to the south, the Courtyard Complex will not be in direct line of sight of the proposed work, which is located to the south of the Courtyard Complex. Visual impact to the Courtyard Complex is not anticipated.							Medium
	Administration and Residential Building Cluster	Residential / Occupational	Few	Good	Yes	Full	Occasional	
VSR4	• This VSR includes mainly the sea travellers travelling to the South Lantau from the South Sea, and the occasional sea travellers travelling to the Siu A Chau and Tai A Chau, which are located to the west of SKC. The views from this VSR are of a transient nature. • Owing to the large extent and exposed nature of the proposed site, the full view of the proposed works will be visible by the VSR in a significant way, especially the presence of the high-rise stack. • In normal situations, ships do not sail close to the site. • There are alternative views with high amenity value to this VSR.							High
	Sea	Sea traveller	Few	Good	Yes	Full	Occasional	
VSR5	• The project site is located about 6km southeast to this VSR. • A portion of the buildings in the project site will be screened off by SKC. Therefore, the proposed works will be partially visible to the VSR. • There are alternative views with high amenity value to this VSR.							High
	Cheung Sha, South Lantau Island	Visitors / Residential	Medium	Good	Yes	Partial	Frequent	
VSR6	• The project site is located about 3.5km southwest to this VSR. • While the buildings in the project site will be screened off by SKC, the top part of the chimney can be seen from the VSR. • There are alternative views with high amenity value to this VSR.							Medium
	Cheung Po Tsai Cave, Cheung Chau	Visitors	Medium	Good	Yes	Glimpse	Occasional	

I.D. no.	VSRs	Type of VSRs	No. of Individuals (Many, Medium, Few, Very Few)	Quality of Existing View (Good, Fair, Poor)	Availability of Alternative Views (Yes/No)	Degree of Visibility (Full, Partial, Glimpse)	Frequency of View (Very Frequent, Frequent, Occasional, Rare)	Sensitivity (Low, Medium, High)
VSR7	• The project site is located about 4km southwest to this VSR. • While the buildings in the project site will be screened off by SKC, the top part of the chimney can be seen from the VSR. • There are alternative views with high amenity value to this VSR.							Medium
	Cheung Chau Ferry Pier	Visitors / Residential	Many	Good	Yes	Glimpse	Occasional	
VSR8	• The project site is located about 6km south to this VSR. • For the VSR at the eastern part of the beach, the buildings in the project site will be screened off by SKC. As the VSR moves towards the western part of the beach, a portion of the proposed works will be visible. • There are alternative views with high amenity value to this VSR.							High
	Pui O Beach	Recreational Engager / Visitors	Medium	Good	Yes	Partial	Frequent	
VSR9	• The project site is located about 8km southeast to this VSR. • While the buildings in the project site will be screened off by SKC, the top part of the chimney can be seen at certain sections of Lantau Trail Stage 2. • There are alternative views with high amenity value to this VSR.							High
	Lantau Trail Stage 2	Hiker	Few	Good	Yes	Glimpse	Occasional	
VSR10	• The project site is located about 8km southeast to this VSR. • At certain sections of Lantau Trail Stage 3, part of the project site can be seen. • There are alternative views with high amenity value to this VSR.							High
	Lantau Trail Stage 3	Hiker	Few	Good	Yes	Partial	Occasional	
VSR11	• The project site is located about 7km southeast to this VSR. • Almost the full view of proposed works will be visible by the VSR. • There are alternative views with high amenity value to this VSR.							High
	Tong Fuk Beach	Recreational Engager / Visitors	Medium	Good	Yes	Full	Frequent	

I.D. no.	VSRs	Type of VSRs	No. of Individuals (Many, Medium, Few, Very Few)	Quality of Existing View (Good, Fair, Poor)	Availability of Alternative Views (Yes/No)	Degree of Visibility (Full, Partial, Glimpse)	Frequency of View (Very Frequent, Frequent, Occasional, Rare)	Sensitivity (Low, Medium, High)
VSR12	• This VSR includes mainly the sea travellers travelling to Macau and Zhongshan, which are located to the west of SKC. • The views from this VSR are of a transient nature. • The distance from the VSR to the project site varies, with a minimum distance of approximately 2.5km. • The full view of proposed works will be visible by the VSR. • There are alternative views with high amenity value to this VSR.							High
	Sea Course between Hong Kong and Macau/ Zhongshan	Travellers	Medium	Good	Yes	Full	Occasional	
VSR13	• The project site is located about 3.5km south to this VSR. • The buildings in the project site will be screened off by SKC. Only the tip of the chimney can be barely seen at certain spots of the trail. • There are alternative views with high amenity value to this VSR.							Medium
	Chi Ma Wan Trail - Yi Long Wan	Hiker	Few	Good	Yes	Partial	Occasional	
VSR14	• The project site is located about 3.5km south to this VSR. • While the buildings in the project site will be screened off by SKC, the top part of the chimney will be visible to this VSR. • There are alternative views with high amenity value to this VSR.							Medium
	Tai Long Wan	Visitors / Residential	Few	Good	Yes	Partial	Occasional	

10b.9.2 Magnitude of Change of Visual Sensitive Receivers

10b.9.2.1 The "Magnitude of Change" of the VSRs is assessed and listed in **Table 10b.13**.

Table 10b.13 Magnitude of Change of Identified Visual Sensitive Receivers

I.D. no.	VSRs	Source of Impact		Compatibility (Good, Fair, Poor)	Duration of Impacts (Very Frequent, Frequent, Occasional, Rare)	Reversibility of Change (Yes, No)	Scale of Impact (Large, Medium, Small)	Viewing Distance (m)	Potential Blockage of View (Full, Partial, Glimpse)	Magnitude of Change (Large, Intermediate, Small, Negligible)	
		Construction	Operation							Construction	Operation
VSR1	Footpath along the Hill	VC-01, VC-02, VC-03, VC-04	VO-01, VO-02, VO-03, VO-04, VO-05, VO-06	Fair	Occasional	No	Large	150	Full	Large	Large
VSR2	Shun House	VC-01, VC-02, VC-03, VC-04	VO-01, VO-02, VO-03, VO-04, VO-05, VO-06	Fair	Occasional	No	Large	200	Partial	Large	Large
VSR3	Administration and Residential Building Cluster	VC-01, VC-02, VC-03, VC-04	VO-01,VO-02, VO-03,VO-04, VO-05,VO-06	Fair	Occasional	No	Large	400	Full	Large	Large
VSR4	Sea	VC-01, VC-03, VC-04	VO-01, VO-02, VO-03, VO-04, VO-05, VO-06	Fair	Occasional	No	Large	200	Full	Large	Large
VSR5	Cheung Sha, South Lantau Island	VC-01, VC-03, VC-04	VO-01, VO-02, VO-03, VO-04, VO-05, VO-06	Fair	Frequent	No	Large	6000	Partial	Intermediate	Intermediate
VSR6	Cheung Po Tsai Cave, Cheung Chau	VC-01, VC-03, VC-04	VO-01	Fair	Occasional	No	Medium	3500	Glimpse	Intermediate	Intermediate
VSR7	Cheung Chau Ferry Pier	VC-01, VC-03, VC-04	VO-01	Fair	Occasional	No	Small	4000	Glimpse	Small	Small
VSR8	Pui O Beach	VC-01,VC-03, VC-04	VO-01, VO-02, VO-03,VO-04, VO-05,VO-06	Fair	Frequent	No	Medium	6000	Partial	Intermediate	Intermediate

I.D. no.	VSRs	Source of Impact		Compatibility (Good, Fair, Poor)	Duration of Impacts (Very Frequent, Frequent, Occasional, Rare)	Reversibility of Change (Yes, No)	Scale of Impact (Large, Medium, Small)	Viewing Distance (m)	Potential Blockage of View (Full, Partial, Glimpse)	Magnitude of Change (Large, Intermediate, Small, Negligible)	
		Construction	Operation							Construction	Operation
VSR9	Lantau Trail Stage 2	VC-01,VC-02, VC-03,VC-04	VO-01,VO-02, VO-03,VO-04, VO-05,VO-06	Fair	Occasional	No	Medium	8000	Glimpse	Small	Small
VSR10	Lantau Trail Stage 3	VC-01,VC-02, VC-03,VC-04	VO-01,VO-02, VO-03,VO-04, VO-05,VO-06	Fair	Occasional	No	Medium	8000	Partial	Small	Small
VSR11	Tong Fuk Beach	VC-01,VC-03, VC-04	VO-01,VO-02, VO-03,VO-04, VO-05,VO-06	Fair	Frequent	No	Medium	7000	Full	Intermediate	Intermediate
VSR12	Sea Course between Hong Kong and Macau/ Zhongshan	VC-01,VC-03, VC-04	VO-01,VO-02, VO-03,VO-04, VO-05,VO-06	Fair	Occasional	No	Large	2500	Full	Intermediate	Intermediate
VSR13	Chi Ma Wan Trail - Yi Long Wan	VC-01,VC-03, VC-04	VO-01, VO-02, VO-03, VO-04, VO-06	Fair	Occasional	No	Medium	3500	Partial	Intermediate	Intermediate
VSR14	Tai Long Wan	VC-01,VC-03, VC-04	VO-01, VO-02, VO-03, VO-04, VO-06	Fair	Frequent	No	Medium	3500	Partial	Intermediate	Intermediate

10b.9.3 Significance Threshold of Visual Sensitive Receivers

10b.9.3.1 Based on the "Sensitivity" as listed in **Table 10b.12** and "Magnitude of Change" as listed in **Table 10b.13**, the degree of significance for VSRs is identified according to the matrix shown in **Table 10b.1**. Significance Threshold of identified VSRs before mitigation is assessed and listed in **Table 10b.14**.

Table 10b.14 Significance Threshold of Identified Visual Sensitive Receivers before Mitigation

I.D. no.	VSRs	Source of Impact		Sensitivity	Magnitude of Change Before Mitigation		Impact Significance Threshold Before Mitigation	
		Construction	Operation		Construction	Operation	Construction	Operation
VSR1	Footpath along the Hill	VC-01, VC-02, VC-03, VC-04	VO-01, VO-02, VO-03, VO-04, VO-05, VO-06	Medium	Large	Large	Moderate / Substantial	Moderate / Substantial
VSR2	Shun House	VC-01, VC-02, VC-03, VC-04	VO-01, VO-02, VO-03, VO-04, VO-05, VO-06	Medium	Large	Large	Moderate / Substantial	Moderate / Substantial
VSR3	Administration and Residential Building Cluster	VC-01, VC-02, VC-03, VC-04	VO-01, VO-02, VO-03, VO-04, VO-05, VO-06	Medium	Large	Large	Moderate / Substantial	Moderate / Substantial
VSR4	Sea	VC-01, VC-03, VC-04	VO-01, VO-02, VO-03, VO-04, VO-05, VO-06	High	Large	Large	Substantial	Substantial
VSR5	Cheung Sha, South Lantau Island	VC-01, VC-03, VC-04	VO-01, VO-02, VO-03, VO-04, VO-05, VO-06	High	Intermediate	Intermediate	Moderate / Substantial	Moderate / Substantial
VSR6	Cheung Po Tsai Cave, Cheung Chau	VC-01, VC-03, VC-04	VO-01	Medium	Intermediate	Intermediate	Moderate	Moderate
VSR7	Cheung Chau Ferry Pier	VC-01, VC-03, VC-04	VO-01	Medium	Small	Small	Slight / Moderate	Slight / Moderate
VSR8	Pui O Beach	VC-01, VC-03, VC-04	VO-01, VO-02, VO-03, VO-04, VO-05, VO-06	High	Intermediate	Intermediate	Moderate / Substantial	Moderate / Substantial
VSR9	Lantau Trail Stage 2	VC-01,VC-02, VC-03, VC-04	VO-01, VO-02, VO-03, VO-04, VO-05,VO-06	High	Small	Small	Moderate	Moderate

I.D. no.	VSRs	Source of Impact		Sensitivity	Magnitude of Change Before Mitigation		Impact Significance Threshold Before Mitigation	
		Construction	Operation		Construction	Operation	Construction	Operation
VSR10	Lantau Trail Stage 3	VC-01,VC-02, VC-03, VC-04	VO-01, VO-02, VO-03, VO-04, VO-05,VO-06	High	Small	Small	Moderate	Moderate
VSR11	Tong Fuk Beach	VC-01, VC-03, VC-04	VO-01, VO-02, VO-03, VO-04, VO-05,VO-06	High	Intermediate	Intermediate	Moderate / Substantial	Moderate / Substantial
VSR12	Sea Course between Hong Kong and Macau/ Zhongshan	VC-01, VC-03, VC-04	VO-01, VO-02, VO-03, VO-04, VO-05, VO-06	High	Intermediate	Intermediate	Moderate / Substantial	Moderate / Substantial
VSR13	Chi Ma Wan Trail - Yi Long Wan	VC-01, VC-03, VC-04	VO-01, VO-02, VO-03, VO-04, VO-06	Medium	Intermediate	Intermediate	Moderate	Moderate
VSR14	Tai Long Wan	VC-01, VC-03, VC-04	VO-01, VO-02, VO-03, VO-04, VO-06	Medium	Intermediate	Intermediate	Moderate	Moderate

10b.10 Mitigation Measures

10b.10.1 Mitigation Measures Approaches

10b.10.1.1 The identification of the landscape and visual impacts highlights the potential primary sources of impacts and their magnitude of change caused to LRs/LCAs/VSRs. Corresponding mitigation measures are proposed to avoid and reduce the identified sources of impacts, and to remedy and compensate unavoidable impact. The potential landscape and visual enhancement is also considered in the proposed measures.

10b.10.2 General Mitigation Measures / Strategies

10b.10.2.1 To avoid direct impact to the valuable landscape resources of SKC, such as the natural shoreline (LR2), the reclamation area is designed not be connected to SKC. The coast of SKC and the reclamation area will be separated by a water channel (about 10 – 40 m in width and 350 m in length). The deeper side of the channel would be about 9m deep.

10b.10.2.2 Minimization of the structure size and footprint is also an important strategy to minimize the landscape and visual impact. Since the seawater (LR3) will be permanently replaced by the reclamation area, this portion of landscape resource is lost and cannot be recovered or mitigated. It is important to minimize the area occupied by the proposed works to practical minimum so that the impact to the seawater (LR3) would be as small as possible. In the design of the site layout and selection of the construction method, minimization of the footprint shall be one of the key design considerations. An efficient site layout and use of cellular cofferdam for the construction of breakwater and the artificial island would be able to reduce the extent of the reclamation, and therefore the impact to the seawater. In the design of the building heights and dimensions, the potential visual impact should be taken into consideration in addition to the engineering and other environmental factors. A balance should be struck between a smooth operation of the facilities and minimization of various environmental impacts. In determination of the height of the stack, it is important to alleviate the potential air quality impacts at critical ASRs, while not to result in significant visual intrusion. To determine the optimal height of the stack, wind tunnel tests that consisted of plume visualization were conducted for the stacks in various heights. The stack height of 150m was a balanced solution considering the air quality impacts at critical ASRs and the potential visual impact. For the other structures of the IWMF, their heights and dimensions should be designed with due consideration of requirements to accommodate the necessary equipments and the effective use of land in order to minimize their size. In this reference design, instead of providing one bulky building at the same height to house all the equipment, structures with different building heights are designed to suit the specific needs of the equipment. The tallest part of the incineration plant is where the incinerators (about 50m) are accommodated, while the other part of the incineration plant and other structures are designed to be at lower heights.

10b.10.2.3 Screening off the structures using landscaped bunds could be an effective mitigation measure for some projects. However, its application for the IWMF at the artificial island near SKC is considered not desirable as the reclamation area would need to substantially increase in order to accommodate landscaped bunds that are large enough to provide efficient screening effect. The potential impacts on other environmental aspects, in particular ecology and water quality, would be more severe. Further extension of the reclamation area towards the south direction may also threaten the safety of the marine traffic travelling in the navigation channel which is about 100m to the south of the reclamation area. As requested by the Marine Department, a minimum 100m clearance between the site and the navigation channel shall be maintained to ensure the safety of the marine traffic travelling in the navigation channel. Although the use of landscape

bunds may not be applicable to this project site, planting strip along the periphery of the project site could provide some screening off effect to some low-rise facilities/structures, such as waste containers at the berth area, to block the view corridors from the VSRs at the same elevation (e.g. sea travellers). The planting will also create a green appearance as viewed from surrounding viewpoints. Restricting the containers to be stacked in maximum 2 layers will be another measure to control the potential visual impact.

10b.10.2.4 The IWMF site is adjacent to SKC with natural geographies of the natural boulders with various sizes surrounding the coastline. On the top of the rocky shores, the hillside of SKC is naturally vegetated with various species of shrubs and trees. Although the reclamation area will be isolated from SKC and no direct impact to the landscape resources and landscape character areas in SKC is anticipated, mitigation measures are proposed to improve to compatibility of the proposed works which are of industrial nature with the Island Landscape (LCA1). Introduction of architectural and landscaping design emphasizing nature as design concept to the IWMF site would partially mitigate the potential landscape and visual impacts. Boulders with the similar textures of the existing rocky shores would be employed for the construction of breakwater and the shoreline of the reclaimed land to blend in with the existing natural shoreline of SKC. Rooftop and vertical greening along the periphery of each building would be implemented to blend the IWMF into the surrounding green island landscape. Landscape measures would also be introduced at the chimney stack to further enhance the overall natural and green concept. The provision of new landscape elements will also transform the existing landscape character (seawater).

10b.10.2.5 The recommended mitigation measures, which are applicable to the individual LR, LCA and VSR, are tabulated in **Table 10b.15**. The locations where the recommended mitigation measures to be implemented are shown in the Landscape & Visual Mitigation Measures Plan (**Figure 10b.10**) for reference.

10b.10.2.6 The mitigation measures during construction will 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 will follow ETWB TCW No. 2/2004 Maintenance of Vegetation and Hard Landscape Features.

10b.10.2.7 In terms of the funding, implementation, management and maintenance of the recommended mitigation measures, the Environmental Protection Department will be the responsible agent. The mitigation measures are considered practical and feasible.

Table 10b.15 Recommended Landscape and Visual Mitigation Measures

ID. No.	Landscape and Visual Mitigation Measure
During Construction Phase	
Mitigation for both Landscape & Visual Impacts	
MLVC-01	Grass-hydroseeded bare soil surface and stock pile area
MLVC-02	Landscape Design 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	Adoption of Natural Features of the Existing Shoreline 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	Greening Design (Rooftop & Vertical Greening) 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.
Mitigation for Visual Impacts	
MVC-01	Visual Mitigation and Aesthetic Design 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.

ID. No.	Landscape and Visual Mitigation Measure
During Operation Phase	
Mitigation for both Landscape & Visual Impacts	
MLVO-01	Planting Maintenance 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	Environmental Education Centre 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	Control of Light 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	Control of Operation Time Minimization of the frequency of waste transportation to practical minimum (e.g. limit the reception of MSW from 8 am to 8 pm)

10b.10.3 Residual Impact of Landscape Resources and Landscape Character Areas

10b.10.3.1 The residual impact of each LCA and LR after mitigation is shown in **Table 10b.16**.

Table 10b.16 Residual Impact of Identified Landscape Resources and Landscape Character Areas after Mitigation

I.D. no.	LRs / LCAs	Recommended Mitigation Measures		Residual Impact Significance Threshold after Mitigation		
		Construction	Operation	Construction	Operation	
					Day 1	Year 10
Landscape Resource						
LR1	Hillside & Vegetated Slope	Nil	Nil	Insubstantial	Insubstantial	Insubstantial
LR2	Shoreline	Nil	Nil	Insubstantial	Insubstantial	Insubstantial
LR3	Seawater	Nil	Nil	Substantial	Substantial	Substantial
LR4	Developed Area	Nil	Nil	Insubstantial	Insubstantial	Insubstantial
Landscape Character Area						
LCA1	Island Landscape	MLVC-02, MLVC-03, MLVC-04	MLVO-01	Slight	Slight	Slight
LCA2	Sea	MLVC-02	MLVO-01	Substantial	Substantial	Substantial

10b.10.4 Residual Impact of Visual Sensitive Receivers

10b.10.4.1 The residual impact of each VSR after mitigation is shown in **Table 10b.17**.

Table 10b.17 Residual Impact of Identified Visual Sensitive Receivers after Mitigation

I.D. no.	VSRs	Recommended Mitigation Measures		Residual Impact Significance Threshold after Mitigation		
		Construction	Operation	Construction	Operation	
					Day 1	Year 10
VSR1	Footpath along the Hill	MLVC-01 MLVC-02 MLVC-03 MLVC-04 MVC-01 MVC-02 MVC-03 MVC-04 MVC-05	MLVO-01 MVO-01 MVO-02 MVO-03	Moderate	Moderate	Slight/ Moderate
VSR2	Shun House	MLVC-01 MLVC-02 MLVC-03 MLVC-04 MVC-01 MVC-02 MVC-03 MVC-04 MVC-05	MLVO-01 MVO-01 MVO-02 MVO-03	Moderate	Moderate	Slight/ Moderate
VSR3	Administration and Residential Building Cluster	MLVC-01 MLVC-02 MLVC-03 MLVC-04 MVC-01 MVC-02 MVC-03 MVC-04 MVC-05	MLVO-01 MVO-01 MVO-02 MVO-03	Moderate	Moderate	Slight/ Moderate
VSR4	Sea	MLVC-02 MLVC-03 MLVC-04 MVC-01 MVC-02 MVC-03 MVC-04 MVC-05	MLVO-01 MVO-01 MVO-02 MVO-03	Moderate/ Substantial	Moderate/ Substantial	Moderate
VSR5	Cheung Sha, South Lantau Island	MLVC-02 MLVC-03 MLVC-04 MVC-01 MVC-02 MVC-03 MVC-04 MVC-05	MLVO-01 MVO-01 MVO-02 MVO-03	Moderate	Moderate	Moderate
VSR6	Cheung Po Tsai Cave, Cheung Chau	MVC-01 MVC-02	MVO-01 MVO-02 MVO-03	Slight/ Moderate	Slight/ Moderate	Slight/ Moderate
VSR7	Cheung Chau Ferry Pier	MVC-01 MVC-02	MVO-01 MVO-02 MVO-03	Slight	Slight	Slight
VSR8	Pui O Beach	MLVC-02 MLVC-03 MLVC-04 MVC-01 MVC-02 MVC-03 MVC-04 MVC-05	MLVO-01 MVO-01 MVO-02 MVO-03	Moderate	Moderate	Moderate

I.D. no.	VSRs	Recommended Mitigation Measures		Residual Impact Significance Threshold after Mitigation		
		Construction	Operation	Construction	Operation	
					Day 1	Year 10
VSR9	Lantau Trail Stage 2	MLVC-01 MLVC-02 MLVC-03 MLVC-04 MVC-01 MVC-02 MVC-03 MVC-04 MVC-05	MLVO-01 MVO-01 MVO-02 MVO-03	Slight/ Moderate	Slight/ Moderate	Slight/ Moderate
VSR10	Lantau Trail Stage 3	MLVC-01 MLVC-02 MLVC-03 MLVC-04 MVC-01 MVC-02 MVC-03 MVC-04 MVC-05	MLVO-01 MVO-01 MVO-02 MVO-03	Slight/ Moderate	Slight/ Moderate	Slight/ Moderate
VSR11	Tong Fuk Beach	MLVC-02 MLVC-03 MLVC-04 MVC-01 MVC-02 MVC-03 MVC-04 MVC-05	MLVO-01 MVO-01 MVO-02 MVO-03	Moderate	Moderate	Moderate
VSR12	Sea Course between Hong Kong and Macau/ Zhongshan	MLVC-02 MLVC-03 MLVC-04 MVC-01 MVC-02 MVC-03 MVC-04 MVC-05	MLVO-01 MVO-01 MVO-02 MVO-03	Moderate	Moderate	Slight/ Moderate
VSR13	Chi Ma Wan Trail - Yi Long Wan	MVC-01 MVC-02	MVO-01 MVO-02 MVO-03	Slight/ Moderate	Slight/ Moderate	Slight/ Moderate
VSR14	Tai Long Wan	MVC-01 MVC-02	MVO-01 MVO-02 MVO-03	Slight/ Moderate	Slight/ Moderate	Slight/ Moderate

10b.10.5 Photomontages of Residual Impact of Visual Sensitive Receivers

10b.10.5.1 **Table 10b.18** shows the visibility of the VSRs to the proposed works. Photomontages for illustration are provided accordingly.

Table 10b.18 Visibility of Visual Sensitive Receivers to Proposed Works

I.D. no.	VSRs	Figure of Photomontage	Visibility of VSR to Proposed Works
VSR1	Footpath along the Hill	Figures 10b.11 to 10b.14	• VSR1 has a full view of the proposed works without blockage.
VSR2	Shun House	Figures 10b.15 to 10b.18	• VSR2 has a partial view of the proposed works.
VSR3	Administration and Residential Building Cluster	Figures 10b.19 to 10b.22	• VSR3 has a full view of the proposed works without blockage.
VSR4	Sea	Figures 10b.23 to 10b.26	• VSR4 has a full view of the proposed works without blockage.

I.D. no.	VSRs	Figure of Photomontage	Visibility of VSR to Proposed Works
VSR5	Cheung Sha, South Lantau Island	Figures 10b.27 to 10b.30	• VSR5 has a partial view of the proposed works.
VSR6	Cheung Po Tsai Cave, Cheung Chau	Figures 10b.31 to 10b.34	• VSR6 has a view of the top part of the chimney while the buildings in the project site are blocked by SKC.
VSR7	Cheung Chau Ferry Pier	Figures 10b.35 to 10b.38	• VSR7 has a view of the top part of the chimney while the buildings in the project site are blocked by of SKC.
VSR8	Pui O Beach	Figures 10b.39 to 10b.42	• VSR8 has a partial view of the proposed works when viewing from the western part of the beach.
VSR9	Lantau Trail Stage 2	Figures 10b.43 to 10b.46	• VSR9 has a view of the top part of the chimney while the buildings in the project site are blocked by of SKC.
VSR10	Lantau Trail Stage 3	Figures 10b.47 to 10b.50	• VSR10 has a partial view of the proposed works.
VSR11	Tong Fuk Beach	Figures 10b.51 to 10b.54	• VSR11 has almost a full view of the proposed works.
VSR12	Sea Course between Hong Kong and Macau/ Zhongshan	Figures 10b.55 to 10b.58	• VSR12 has a full view of the proposed works without blockage.
VSR13	Chi Ma Wan Trail - Yi Long Wan	Figures 10b.59 to 10b.62	• VSR13 has a view of the tip of the chimney while the buildings in the project site are blocked by of SKC.
VSR14	Tai Long Wan	Figures 10b.63 to 10b.66	• VSR14 has a view of the top part of the chimney while the buildings in the project site are blocked by of SKC.

10b.10.5.2 In addition to the photomontages viewed from the VSRs, photomontages from a bird's eye view are also prepared to provide an overview to the proposed works as well as the recommended mitigation measures (see **Figures 10b.67 to 10b.70**.)

10b.11 Cumulative Impacts

10b.11.1.1 The two proposed projects in the vicinity of the artificial island near SKC, including the sewerage works in South Lantau and the replacement of the existing submarine water main between Northern Channel of Cheung Chau and Chi Man Wan Peninsula, are distant from the artificial island near SKC. Cumulative visual and landscape impact of the IWMF and these projects is not anticipated.

10b.12 Conclusion

10b.12.1 Landscape Impact

10b.12.1.1 During both the construction and operation phases, the impact to the landscape resources and landscape character areas would be "insubstantial", except the Island Landscape (LCA1) which is rated as "moderate" and Seawater (LR3 & LCA2) which are rated as "substantial".

10b.12.1.2 To avoid direct impact to the valuable landscape resources of SKC, such as the natural shoreline (LR2), the reclamation area is designed not be connected to SKC. The coast of SKC and the reclamation area will be separated by a water channel (about 10 – 40 m in width and 350 m in length). The deeper side of the channel would be about 9m deep. Although the reclamation area will be isolated from SKC and no direct impact to the landscape resources and landscape character areas in SKC is anticipated, mitigation measures are proposed to improve to compatibility of the proposed works which are of industrial nature with the landscape resources and landscape character areas in SKC. The measures include introduction of architectural and landscaping design emphasizing nature as the design concept. Boulders with the similar textures of the existing rocky shores would be employed for the construction of breakwater and the shoreline of the reclamation area to echo the existing natural shoreline of SKC. Rooftop and vertical greening along the periphery of each building would be implemented to increase the amenity value of the IWMF, and more importantly to blend into the surrounding green environment. Landscape would also be introduced at the stack to further enhance the overall natural and green concept.

10b.12.1.3 For LR3, since the seawater will be permanently replaced by the reclamation area, this portion of landscape resource is lost and cannot be recovered or mitigated. However, the quantity of loss of the seawater as landscape resource is relatively small in comparison to the large extent of the adjacent seawater landscape within and outside the study area. Together with other measures such as efficient site layout and use of cellular cofferdam for the construction of breakwater and the artificial island, the area occupied by the proposed works is reduced to practical minimum so that the impact to LR3 would be as small as possible.

10b.12.1.4 For LCA2, apart from minimizing the landscape impact as mentioned above, extensive landscape areas and greening will be provided as a mitigation measure to improve the naturalness of the project site. The provision of new landscape elements will transform the existing landscape character.

10b.12.1.5 Currently, the proposed projects in the vicinity of the artificial island near SKC include the sewerage works in South Lantau and the replacement of the existing submarine water main between Northern Channel of Cheung Chau and Chi Man Wan Peninsula. As the sites of the two projects are distant from the artificial island near SKC, cumulative landscape impact of the IWMF and these projects is not anticipated.

10b.12.2 Visual Impact

10b.12.2.1 During the construction phase, the visual impact to most of the visual sensitive receivers would be “moderate / substantial”, and the visual impact to the sea travellers (VSR4) would be “substantial”. After the implementation of mitigation measures, the residual impact to the VSR4 would become “moderate / substantial” during construction while most of the other VSRs become “slight / moderate” or “moderate”.

10b.12.2.2 During the operation phase, the visual impact to most of the visual sensitive receivers would be “moderate / substantial” or “moderate”, and the visual impact to the sea travellers (VSR4 & VSR12) would be “substantial” and “moderate / substantial” respectively. As these VSRs are transient in nature, the proposed works would unlikely create a prolonged visual impact to these VSRs.

10b.12.2.3 Regarding the visual impacts induced by the reclamation and construction of facilities, mitigation measures are proposed including aesthetic design with a view to enhance the aesthetic quality and to blend in the proposed works into the natural surrounding, at the same time reducing the visual mass of the structure. This is achieved by rooftop and

vertical greening along the building façade, use of natural materials with recessive colour, provision of sky gardens between the stacks, provision of observation deck to diminish the feeling of chimney, etc.

10b.12.2.4 To maximize visual compatibility between the existing natural shoreline of SKC and the IWMF, mitigation measure to adopt natural rocks with similar colour as rocky shore of SKC for the construction of breakwater and artificial shoreline will improve the visual quality.

10b.12.2.5 After the implementation of the proposed mitigation measures, the residual impact to some of the visual sensitive receivers would be reduced to "slight / moderate", and the residual impact to the sea travellers (VSR4 & VSR12) would become "moderate / substantial" and "moderate" in day 1 of operation and "moderate" and "slight / moderate" respectively in year 10 of operation. The residual impact to some middle / long distance VSRs such as Cheung Sha (VSR5), Pui O Beach (VSR8) and Tong Fuk Beach (VSR11) would remain "moderate" in year 10 of operation due to the fact that some of the mitigation measures such as rooftop and vertical greening would not easily be appreciated from a distance.

10b.12.2.6 The two proposed projects in the vicinity of the artificial island near SKC, including the sewerage works in South Lantau and the replacement of the existing submarine water main between Northern Channel of Cheung Chau and Chi Man Wan Peninsula, are distant from the artificial island near SKC. Cumulative visual impact of the IWMF and these projects is not anticipated.

10b.12.3 Overall Residual Impact

10b.12.3.1 In conclusion, the potential landscape and visual impacts can be reduced by implementing the proposed mitigation measures during construction and operation phases. With reference to criteria defined in Annex 10 of the EIAO TM, the overall residual impacts are considered as "marginally acceptable with mitigation measures" after implementing the mitigation measures, that is to say "there would be some adverse effects, but these can be eliminated, reduced or offset by specific measures".