13 LANDSCAPE AND VISUAL IMPACT

13.1 INTRODUCTION

13.1.1 This Section provides a summary of the results of the landscape and visual impact assessment for the Theme Park and associated developments, provided in full in *Annex K*, to satisfy Study Brief Clauses 2.1 (vi), 3.2 (iii and iv), 3.7, 3.8.10, 3.8.12, 3.8.13 and 3.8.14.

13.1.2 The Section summarises the assessments of the following components:

- The Reclamation;
- The International Theme Park;
- The Penny's Bay Rail Link;
- The Road Works and Piers;
- The Water Recreation Centre; and
- The Drainage Channel.

13.1.3 The cumulative impacts from these individual components are then examined to determine their overall acceptability.

13.2 BASELINE CONDITIONS

13.2.1 The existing environment of the proposed reclamation, Theme Park and associated Designated Projects is rural in nature and consists of a bay, Penny's Bay, and shoreline with several upland hill areas rising to the northeast and northwest. The Penny's Bay area is predominantly undulating hillsides forming a well-enclosed valley between two high points, Fa Peng Teng to the northeast, and Tai Shan to the northwest. Areas of shrub and woodland exist on lower slopes of the two hill areas, while upper slopes are dominated by grassland. There is some man-made intrusion in the form of Penny's Bay Gas Turbine Plant (GTP) and shipyard (CLS) site along the east coast of the bay.

13.2.2 Several distinct types of landscape character zones have been identified to describe the landscape baseline conditions. The zones can be described as follows:

PA TAU KWU HEADLAND

13.2.3 This is a distinctive, visually prominent character zone just north of the proposed reclamation on the southern lower slopes of Fa Peng Teng. It is a well-vegetated area with shrubs and woodlands.

PA TAU KWU VALLEY

13.2.4 This character zone is a small coastal valley consisting of a beach and stream valley, and associated shrub vegetation. It lies at the southern foot of Fa Peng Teng.

UPLAND AREAS OF FA PENG TENG, TAI YAM TENG, AND TAI SHAN/LAI PIK SHAN

13.2.5 These are extensive zones, the southern parts of which enter the Study Area, and consist of the hills of Fa Peng Teng and Tai Yam Teng, and Tai Shan Lai Pik Shan. These are exposed upland areas

with predominantly grass vegetation. These natural zones have high visual exposure to surrounding areas.

PENNY'S BAY AND VALLEY

13.2.6 This is an extensive valley between the hills Fa Peng Teng on the east and Tai Shan on the west, and has a strong degree of spatial enclosure. Vegetation is predominantly woodland and shrubs. Intrusion by man includes GTP and CLS site on the eastern half of the bay, while the western half preserves its original landscape.

SZE PAK WAN AND VALLEY

13.2.7 This is a large valley zone consisting of a small bay and associated stream valleys to the west of the proposed reclamation at the southern foot of Tai Shan. Vegetation comprises shrubs and woodland, and the landscape character is natural.

13.2.8 A high degree of visual amenity is associated with the local visual system created by the extensive panoramic views of the prominent natural landscape and seascape scenery of Northshore Lantau. Visual amenity is reduced in the Penny's Bay area due to the intrusions of the GTP and CLS sites, and to the north along the NLH corridor due to the intrusion of extensive infrastructural components and slope cutting related to the highway. The Chok Ko Wan area of Penny's Bay exhibits reduced visual amenity due to scarring of the local landscape from previous borrow activities.

13.2.9 The area of Penny's Bay is inter-visible with an extensive area of Hong Kong. However, a good deal of receiver areas are at significant distances, therefore visibility is reduced due to local weather and atmospheric conditions. To the north visibility is strongly confined due to the topography of the hills of Tai Shan and Fa Peng Teng. To the south visibility is more open and exposed, covering extensive areas of Lantau Island coastal sections, the islands of Peng Chau, Chau Kung Po, Hei Ling Chau, Kau Yi Chau and Siu Kau Yi Chau, Tsing Yi Island and Lamma Island, as well as the ferry routes to Mui Wo and Discovery Bay. The Tsing Ma Bridge, located between the Study Area and Tsing Yi Island, is a major landmark to the local visual system. Local topographical conditions within the Penny's Bay area give rise to small local areas that are not intervisible with the proposed development.

13.3 IMPACT ON LANDSCAPE ELEMENTS

13.3.1 The Project proposals impact on the elements that combine to form the local landscape. These elements are the local topography,

13.3.2 Vegetation cover, streams, coastline and, bay and coastal waters. The local topography is dominated by natural hillside and a considerably smaller area of existing disturbed topography. The proposed transport infrastructure will have the most significant effects on local hill side topography and in particular the CKWLR and Road P2 will create significant adverse impact. Vegetation cover comprises grassland, shrub groups and woodland and in general woodland has a higher landscape value and thus higher sensitivity. These elements are affected primarily by the proposed transport infrastructure and in particular woodland will be adversely affected by road proposals at Ngong Shuen Au.

13.3.3 Natural streams flow down the local hillslopes into Penny's Bay and adjacent coastal areas. They are considered to have a high landscape value and will be impacted to the greatest level by the proposed transport infrastructure and to a lesser extent by the reclamation that could affect the lower reaches of these streams to a slight degree as they meet the coast.

13.3.4 The local coastline comprises natural and man made sections. Higher value is placed on the natural component however the Penny's Bay area contains a high proportion of existing man-made coast. The reclamation will remove sections of natural coastline and is therefore a significant impact. The proposal of an open channel along the western edge of the Penny's Bay reclamation has however allowed the retention of an extensive length of natural coastline within the Study Area.

13.3.5 The bay and coastal waters of the Study Area will be directly impacted upon by the creation of reclamation at Penny's Bay and Yam O. This comprises a natural resource of high landscape value and there is therefore an associated high adverse impact due to the reclamation component of the development.

13.4 IMPACT ON LANDSCAPE CHARACTER

13.4.1 There will be a high level of change to the landscape character of the Study Area. This change will primarily occur to Penny's Bay and valley character zone where the majority of the proposed development will occur resulting in the formation of a group of new character areas based on the new facilities to be provided there, such as the WRC and the Theme Park. In general the character will change from a predominately rural type to a more semi-rural/urban type. The upland character zones are largely unaffected by development proposals except for the intrusion of the CKWLR in the Fa Peng Teng and Tai Yam Teng zone which is expected to have a resulting significant loss of character.

13.5 VISUAL IMPACT

13.5.1 A high level of change is expected for the local visual system of the Study Area. In general terms the higher levels of adverse impact will result from a loss of a large area of bay and coastal waters, the temporary low visual quality associated with the undeveloped reclamation, and slope cutting associated with the CKWLR and Road P2. The receivers of this potential impact will include those existing in the defined visibility contour plan at the present day and those who will be there in the future such as visitors to the Theme Park and other new facilities.

13.6 MITIGATION MEASURES

13.6.1 A range of mitigation measures have been proposed for the various components of development and these are summarised as follows:

RECLAMATION

13.6.2 The reclamation mitigation measures include temporary hydroseeding along the edge to improve its visual characteristics. The natural full development of the reclamation will in effect be the primary form of mitigation and these developments will include a high level of landscape treatment.

THEME PARK

13.6.3 The Theme Park construction stage will be mitigated by the proposed advancement of construction and landscaping of the permanent soil berms in the overall development programme. A temporary screen berm is also proposed to screen the Theme Park Phase I users from the development works occurring in Theme Park Phase II. The operation phase is considered to be of a high visual value and not requiring mitigation.

ROAD WORKS AND PIERS

13.6.4 Mitigation proposals will be required in particular for the slope cutting associated with the CKWLR and Road P2. The mitigation includes slope landscaping and minimisation of the areas affected by slope cutting. The base design proposals for the Resort Roads and a section of the Road P2 have incorporated a high level of landscaping and no further mitigation will required for them. The piers are proposed to have an architectural treatment to integrate them with the Theme Park which should avoid using reflective materials to minimise excessive glare.

WATER RECREATION CENTRE WITH LAKE

13.6.5 In general this facility will contribute positively to the overall appearance of the new development and in particular the lake will be visually attractive. Mitigation proposals will therefore enhance this situation and include landscape planting around the lake and WRC and design of facilities. Such proposals will enhance the appearance of the facility and integrate it into the surrounding landscape whilst minimising impacts of lighting to receivers outside the Theme Park.

PENNY'S BAY RAIL LINK

13.6.6 A range of detailed mitigation proposals are scheduled for the proposed rail link development and associated stations for both the construction and operational stages (*Annex M*). In general these will include landscape treatment to the development and visual integration of architectural elements, such as vent shafts, tunnel portals and station buildings through architectural and colour treatment.

DRAINAGE CHANNEL

13.6.7 The mitigation proposals for the open channels will include landscape treatment to the channel edge areas which will visually enhance the overall appearance to an acceptable level.

13.7 CUMULATIVE IMPACT

13.7.1 Landscape elements that will experience a moderate to high magnitude of change include woodland at Ngong Shuen Au and topography and streams due to the CKWLR and Road P2, and coastline and coastal waters due to the reclamation. The landscape character of the bay will experience the greatest magnitude of change, as will the upland character zones in which will occur cut slopes of the CKWLR and Road P2. The proposed developments have merit as they constitute "preservation in part of the existing landscape," with the bulk of upland area character zones retaining their existing qualities. The developments also have merit as they "establish a new landscape character" for the area of Penny's Bay, the original character zone of which was marred by the power plant, shipyard, and scarring from borrow activities.

13.7.2 Visually there is expected to be a high cumulative impact from the proposed developments and a high degree of change in the local visual system of Northshore Lantau. This will result from the loss

of predominately natural scenery of high visual amenity to a system with a combination of suburban visual quality and a backdrop of relatively undisturbed hills.

13.8 RESIDUAL IMPACT AND ACCEPTABILITY OF IMPACT

13.8.1 The primary residual impacts that have been identified are the loss of Penny's Bay and coastal waters and the adverse impact of the CKWLR on local topography, landscape character and the local visual system.

13.8.2 In accordance with *Annex 10* of the *EIAO TM* the landscape and visual impact is considered acceptable with mitigation.

13.8.3 The results of the landscape and visual impact assessment, provided in full in *Annex K*.