

13.2 Standards and Legislation

- 13.2.1** The methodology for undertaking the landscape and visual impact assessment is in general accordance with Annex 18 of the Technical Memorandum to the Environmental Impact Assessment Ordinance (EIAO).
- 13.2.2** The Landscape Impact Assessment will assess the source and magnitude of developmental effects on the existing landscape elements, character and sensitivity in the context of the site and its environs. The Visual Impact Assessment will assess the source and magnitude of effects caused by the proposed development on the existing views, visual amenity, character and quality of views from the visually sensitive receivers within the context of the site and its environs. Both the landscape and visual assessments will identify measures to mitigate landscape and visual effects.
- 13.2.3** The evaluation will be in accordance with the assessment criteria set out in Annex 10 of the Technical Memorandum to the EIAO. In accordance with the EIAO the assessment will take into account the potential impacts of all planned use. Planned use includes the land use in the draft or approved plans prepared under the Town Planning Ordinance (Cap. 131) or any other land use plans published by the Government.
- 13.2.4** As the impact assessment is undertaken in accordance with the requirements of the EIAO, the proposed project comprises a Schedule 3 Designated Project, i.e. a residential development for over 100,000 population. Within this, the overall project also comprises a series of Schedule 2 Designated Projects relating to individual developmental items, e.g. roads, pumping stations, etc. These will be assessed in accordance with the EIAO in separate studies in order to apply for individual Environmental Permits. However, they have been included to a certain level of detail in this report in order to both minimise impacts as early as possible and for future reference.

13.3 Landscape Impact Assessment Methodology

13.3.1 Introduction

13.3.1.1 The term 'landscape' in the context of this assessment refers to the 'townscape' that makes up the majority of the study area. This methodology is based on the EIAO TM Annexes 10 and 18, and the EIA Study Brief. The assessment is also in line with the Guidelines for Landscape and Visual Impact Assessment, published by the Landscape Institute and Institute of Environmental Assessment. The assessment of the potential impacts of a proposed scheme on the existing landscape comprises two distinct sections:

- (a) baseline survey: a description of the existing situation, identification of sensitive receivers (landscape elements or resources and character areas), assessment of the sensitivity of receivers; and
- (b) potential landscape impacts assessment: description of proposed development, identification and gradation of resultant impacts on sensitive receivers.

13.3.2 Landscape Baseline

13.3.2.1 A baseline survey of the existing landscape/townscape character and quality, of the site and its environs, has been undertaken through site inspections and desk-top study utilising: mapping at 1:20,000, 1:5000 and 1:1000; oblique and vertical aerial photographs; and Outline Zoning Plans (OZP) for the area.

13.3.2.2 The landscape elements considered are likely to include:

- (a) Physical aspects such as landform, drainage (notably the nullah) and soils. Particular reference will be given to the lowlying situation of the site and its open aspect to the harbour, in the context of the surrounding high ground including Lion Rock, Kowloon Peak, the ridgeline on Hong Kong Island;
- (b) Vegetation, including species and maturity of amenity plantings and any champion trees;
- (c) Built form, including the airport buildings and adjacent residential and industrial districts;
- (d) Patterns of settlement: arrangement of housing estates, height of buildings, street layout, transport routes;
- (e) Land use: relationship between public and private housing areas, and open space provision;
- (f) Confirmed developments in or adjacent to the study area;
- (g) Scenic spots, such as recreational trails, notable viewpoints, important buildings, public open space and the harbour;
- (h) Local distinctiveness: details of local materials, styles, streetscapes, etc.;
- (i) Valued landscapes (including cultural and religious identity): historical airport development, Fish Tail Rock, Sung Wong Toi Rock, Kowloon Walled City Park and local temples and churches;
- (j) Tree species of significant value which should be conserved; and
- (k) Areas of conservation interest.

13.3.2.3 The baseline survey will form the basis of the landscape context by describing broadly homogenous units of similar character. The sensitivity of each 'landscape character unit' (LCU) will be categorised, depending on its tolerance to change; low, medium or high. Sensitivity will be defined using a combination of factors: the inherent character of the landscape/townscape; the features (or landscape resources) that are present in the landscape; and the wider context of the landscape character unit, i.e. whether it is considered to be of local or regional importance by virtue of individual landscape features or its amenity value to the local community, for example. The character of the landscape is linked to local distinctiveness, visual amenity, and to aspects of cultural association and heritage value. An inventory of important landscape features within the study area will be compiled, in accordance with the preceding list. Both the 'landscape character units' and the 'landscape features' will be mapped. The description of individual LCUs will take into account planned and committed developments in line with the findings of the Planning and Development Review.

13.3.3 Landscape Impact Assessment

13.3.3.1 The potential landscape impacts of the proposals are likely to result from:

- (a) identification of the sources of impact, and their magnitude, that would be generated during all phases of the construction and operation of the scheme; and
- (b) identification of the principal landscape impacts, primarily in consideration of the degree of change to the baseline conditions. The impacts are considered systematically in terms of the landscape elements, the site and its context, based on the two categories of sensitive receiver: Landscape Feature and Landscape Character Unit.

13.3.3.2 The assessment will be undertaken for two distinct periods. The first is the construction phase, where impacts are largely considered to be temporary. The second phase is operation or the completed development. This includes the opening year when all the hard mitigation measures are in place, but the soft landscape mitigation measures are expected to be largely ineffective due to their lack of maturity; and design year, which is taken as fifteen years after the opening year, when soft landscape elements are deemed to have reached a level of maturity commensurate with the performance of the proposed landscape mitigation design objectives.

13.3.3.3 Quantification of impacts on landscape features will be included. With reference to the above, the level of impact on the landscape/townscape is a product of the following:

- (a) Factors relating to sensitivity of receiver including:
 - the existing character and quality of the landscape/townscape (LCU) taking into account future committed development;
 - maturity, rarity, distinctiveness and sensitive landscape designation of landscape resource; and,
 - tolerance of the landscape to absorb the change, i.e. its sensitivity.
- (b) Factors relating to magnitude of change including:
 - source, nature and magnitude of potential impacts (related to the scale of the development);
 - duration and reversibility of changes;
 - Construction and Operation phase impacts;
 - the degree of change caused by each of the impacts to the existing landscape (landscape feature or LCU);
 - significance of this change in the local and regional context; and,
 - cumulative effects on the landscape of this and neighbouring proposals.

13.3.4 Sensitivity of Character Area

13.3.4.1 The sensitivity/importance of each landscape feature and character unit will be assessed as follows:

- (a) High: important components or landscape of particularly distinctive character or high importance locally, susceptible to relatively small changes; e.g. local open space; water-frontage; temple; vernacular village areas; natural hillside;
- (b) Medium: landscape or feature of moderately valued characteristics reasonably tolerant to change; e.g. dense commercial development; housing estates; and
- (c) Low: relatively unimportant landscape or feature, the nature of which is largely tolerant to change; e.g. old industrial areas; storage areas; derelict land; shopping mall; rail depot; cargo working area.

13.3.4.2 The relative sensitivity to change of a townscape character unit is the product of a complex interaction between the components that make up the urban fabric. Factors that will be analysed in order to establish sensitivity include: density of development; character and coherence of buildings; character and hierarchy of spaces and streets; prevailing landuses and building types bringing uniformity or diversity; relationship of built character unit to landscape, including significant landmarks, vistas and panoramas; legibility (clear sense of place); nature of boundaries resulting in integration or severance; and cultural or historic association.

13.3.5 Magnitude of Change

13.3.5.1 The magnitude of the change caused by the proposals may differ between the construction and operation stages of the development and is assessed accordingly, based on the following:

- (a) High: Notable change in the landscape characteristics over an extensive area ranging to very intensive change over a more limited area;
- (b) Moderate: a medium level of change in a localised area;
- (c) Low: Slight or barely perceptible changes; and
- (d) Negligible: no discernible change.

13.3.5.2 The impact is derived from the degree or magnitude of change which the proposals will cause to the existing landscape context (features and LCUs) and its ability to tolerate that change, i.e. its sensitivity. The analysis of the degree of impact is based on the following matrix:

Magnitude of Change caused by proposals	High	Moderate Impact*	Moderate / Significant Impact	Significant Impact
	Moderate	Slight / Moderate Impact	Moderate Impact	Moderate / Significant Impact
	Low	Slight Impact	Slight / Moderate Impact	Moderate Impact
	Negligible	Negligible	Negligible	Negligible
		Low	Medium	High
Sensitivity of Landscape Character Unit / Feature				

* Note: The above matrix will apply in the assessment of the majority of situations, however, in certain cases a deviation from this may occur; for example, the impact may be so major that a significant impact results from a high magnitude of change to a landscape of low quality/sensitivity.

13.3.5.3 The significance thresholds are considered as follows:

Adverse / Beneficial Impacts	
Significant	adverse/beneficial impact where the proposal would cause significant deterioration or improvement in existing landscape quality
Moderate	adverse/beneficial impact where the proposal would cause a noticeable deterioration or improvement in existing landscape quality
Slight	adverse/beneficial impact where the proposal would cause a barely perceptible deterioration or improvement in the existing landscape quality
Negligible	no discernible change in the existing landscape quality.
Neutral	change in character may be significant or slight but is regarded as neither adverse or beneficial

13.3.5.4 Should there be insufficient design information with respect to undertaking a detailed landscape impact assessment, a recommendation will be given to undertake additional investigation at a later stage when sufficient design is available.

13.4 Visual Impact Assessment Methodology

13.4.1 Introduction

13.4.1.1 The assessment of the potential visual impact of the scheme comprises two distinct parts:

- (a) baseline visibility survey; and
- (b) visual impact assessment.

13.4.2 Baseline Survey

13.4.2.1 The baseline survey seeks to identify the areas from which the site is visible and the approximate numbers and groups of people affected. It is not practical for a project of this scale to identify and visit each and every affected building, street, open space etc. Visual receptors will therefore be rationalised by grouping together those buildings or districts which have similar views and the assessment will be carried out based on typical views from these VSR groups and scenic viewpoints of major importance will be addressed.

13.4.2.2 A variety of techniques have been employed to identify the zone of visual influence of the development, including topographical analysis, photographic survey and construction of working section drawings as appropriate. Mapping the visual envelope locates the zones of visually sensitive receivers (VSRs), and facilitate visual contouring based on distance from the