Contents

Tables

Figures

Appendices

11. Landscape and Visual Impact

11.1 Introduction

11.1.1.1 This section presents the findings of the assessment of potential landscape and visual impacts associated with the Project.

11.1.1.2 Landscape and visual impacts assessment are assessed in accordance with the criteria and guidelines as stated in Annexes 10 and 18 of the Technical Memorandum (TM) and the Environmental Impact Assessment Ordinance (EIAO) Guidance Note No. 8/2010 on "Preparation of Landscape and Visual Impact Assessment under the Environmental Impact Assessment Ordinance".

11.1.1.3 The assessment area for landscape impact assessment shall include areas within a 100m distance from the site boundary of the Project, which is in accordance with the EIA Study Brief (No. ESB-348/2021), which the assessment area for the visual impact assessment shall be defined by the visual envelope of the Project.

11.2 Relevant Legislations and Guidelines

11.2.1.1 The following legislation, standards, guidelines and references are applicable to landscape and visual impact assessment associated with the construction and operation of the project:

- EIAO (Cap. 499) and EIAO-TM, particularly Annexes 10 (Criteria for Evaluating Visual and Landscape Impact, and Impact on Sites of Cultural Heritage) and 18 (Guidelines for Landscape and Visual Impact Assessment);
- EIAO Guidance Note 8/2010 (Preparation of Landscape and Visual Impact Assessment under the EIAO);
- Town Planning Board Guidelines on Submission of Visual Impact Assessment for Planning Application to The Town Planning Board TPB PG-NO.41;
- Town Planning Ordinance (Cap131);
- Hong Kong Planning Standards and Guidelines (HKPSG) issued by PlanD;
- Landscape Character Map of Hong Kong (2005 Edition);
- Government General Regulation 740 – sets out restrictions on the preservation and felling of trees in Hong Kong;
- AFCD Nature Conservation Practice Note No.2 - Measurement of Diameter at Breast Height (DBH);
- AFCD Nature Conservation Practice Note No.3 – the use of Plant Names;
- AFCD Publication – Rare and Precious Plants of Hong Kong (2003);
- AFCD Publication – Check List of Hong Kong Plants 2012;
- "AFCD Survey of Local Fung Shui Woods", Hong Kong Biodiversity Newsletter Issue No. 8, AFCD (March 2005);
- "Venturing Fung Shui Woodlands", Friends of the Country Parks, AFCD, Cosmos Books Ltd. (2004).
- DEVB TC(W) No. 5/2020 - Registration and Preservation of Old and Valuable Trees;

- DEVB TC(W) No. 4/2020 - Tree Preservation;
- DEVB TC(W) No. 1/2018 - Soft Landscape Provisions for Highway Structures – Greening on Footbridges & Flyovers;
- DEVB TC(W) No. 5/2017 - Community Involvement in Planting Works;
- DEVB TCW No. 6/2015 - Maintenance of Vegetation and Hard Landscape Features;
- DEVB TC(W) No. 3/2012 - Site Coverage of Greenery for Government Building Projects;
- DEVB TC(W) No. 2/2012 - Allocation of Space for Quality Greening on Roads;
- ETWB TCW 8/2005 - Aesthetic Design of Ancillary Buildings in Engineering Projects;
- ETWB TCW No. 36/2004 – The Advisory Committee on the Appearance of Bridges and Associated Structures (ACABAS);
- GEO Publication 1/2011 - Technical Guidelines on Landscape Treatment for Slopes;
- GEO Publication (1999) - Use of Vegetation as Surface Protection on Slopes;
- Lands Administration Office Practice Note (LAO PN) No. 1/2020 - Compliance of Landscape Clause under Lease;
- Lands Administration Office, Practice Note (LAO PN) Issue No. 2/2020 and 2/2020A – Tree Preservation and Removal Proposal for Building Development in Private Projects Compliance of Tree Preservation Clause under Lease and Guideline Notes (August 2022);
- Guidelines on Tree Transplanting (9/2014), GLTM of DEVB
- Guidelines on Tree Preservation during Development (4/2015), GLTM of DEVB
- Restrictions on the preservation and felling of trees in Hong Kong are specified in Government General Regulation 740. 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 list of protected species in Hong Kong is defined in the Forestry Regulations, made under Section 3 of the Forests and Countryside Ordinance (Cap. 96);
- Environmental Protection Department (EPD), 9/2019, Guidelines on Handling Yard Waste for Recycling and Disposal;
- Annex 5 (Tree Works Vetting Panel) of HyD GC No. 5/2016 – "Technical Administrative Committees in Highways Department"
- HyD RD/GN/044B – Guidance Notes on Design and Construction of Pavements with Paving Units" (November 2020);
- HyD BS/GN/047 – Guidelines Notes on Design of Covers for Walkways and Passenger Shelters;
- Requirements for Handover of Vegetation to Highways Department (2020 version);

11.3 Assessment Methodology

11.3.1 Study Area

11.3.1.1 According to EIA Study Brief (No. ESB-348/2021), the Study Area for the Landscape Impact Assessment (LIA) shall include all areas within 100 m of the project boundary of the project. The assessment of landscape character areas and landscape resources will include all areas within the Study Area boundary. The assessment area for the visual impact assessment shall be defined by the visual envelope of the Project and associated works.

11.3.1.2 The Landscape Impact Assessment shall identify, describe and quantify any potential landscape and visual impacts, and evaluate the significance of such impacts on sensitive receivers. Both the landscape and visual assessments shall propose measures to avoid or mitigate landscape and visual impacts.

11.3.1.3 Only aboveground construction activities including temporary structures and permanent structures are assessed in this report. All underground activities and facilities are unlikely to impose landscape and visual impacts, and hence are not assessed.

11.3.2 Methodology for Assessment of Landscape Impacts

General Approach

11.3.2.1 This section has been structured around the criteria and guidelines as stated in Annexes 10 and 18 of the TM and EIAO Guidance Note No. 8/2010 on "Preparation of Landscape and Visual Impact Assessment under the Environmental Impact Assessment Ordinance" for evaluating and assessing combined landscape and visual impacts of the Project and associated works. In accordance with the EIAO, the assessment will take into account the potential impacts of all existing / planned / approved land 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. A general qualitative appraisal of the landscape and visual impacts using existing available information has been adopted.

11.3.2.2 The Landscape Impact Assessment shall identify, describe and quantify any potential landscape and visual impacts, and evaluate the significance of such impacts on sensitive receivers. Both the landscape and visual assessments shall propose measures to avoid or mitigate landscape and visual impacts.

Assessment Methodology

11.3.2.3 Landscape and visual impacts have been assessed separately for the construction and operational phases.

Landscape Impact Assessment

11.3.2.4 The assessment of landscape impacts has involved the following procedures:

- **Identification of the baseline Landscape Resources (LRs) and Landscape Character Areas (LCAs)** found within the assessment area. The assessment area includes all areas

within 100 m of the Project area. This has been achieved by site visit and desktop study of topographical maps, information databases and photographs. In this report, buildings, roads and pavement are not considered landscape resources and have therefore not been included in the mapping of resources. However, it is inevitable that during the process of identification for broad areas of landscape resources, some buildings, roads, hard paving, or other features may be included – or conversely some trees or other resource may be left out. This report attempts to formalise boundaries between distinct areas of landscape resources for the purpose of impact assessment and should not be construed as reflecting every single variable on the ground.

11.3.2.5 Assessment of the degree of sensitivity of the landscape resources. This is influenced by a number of factors including:

- Quality and maturity, condition and value of landscape resources / character areas, taking into account information from the Broad Brush Tree Survey and general quality, maturity and condition of other types of vegetation. (Ranked as High, Medium or Low)
- Importance/rarity of landscape resources/character areas. (Ranked as High, Medium or Low)
- Whether a landscape resource/character area is considered to be of local, regional, national or global importance. (Taken into account and included in the descriptive text where relevant)
- Whether there are any statutory or regulatory limitations/requirements relating to the landscape resources / character areas. (Taken into account and included in the descriptive text where relevant)
- Ability of the landscape resources/character areas to accommodate change without compromising their essential nature. (Ranked High, Medium or Low)

11.3.2.6 The sensitivity of each landscape feature and character area is classified as follows:

High: Important landscape or landscape resource of particularly distinctive character or high importance, sensitive to relatively small changes.

Medium: Landscape or landscape resource of moderately valued landscape characteristics reasonably tolerant to change.

Low: Landscape or landscape resource, the nature of which is largely tolerant to change.

- **Identification of potential sources of landscape impacts.** These are the various elements of the construction works and operation procedures that would generate landscape impacts.
- **Identification of the magnitude of landscape change.** The magnitude of change depends on a number of factors including the physical extent of the impact, the landscape and visual context of the impact, the compatibility of the Project with the surrounding landscape; and the time-scale of the impact - i.e. whether it is temporary (short, medium or long-term) and therefore reversible, permanent but potentially reversible, or permanent and irreversible. Landscape impacts have been quantified wherever possible. The magnitude of landscape impacts is classified as follows:

  Large: The landscape or landscape resource would suffer a major change.

  Intermediate: The landscape or landscape resource would suffer a moderate change.

  Small: The landscape or landscape resource would suffer slight or barely perceptible changes.

  Negligible: The landscape or landscape resource would suffer no discernible change.

- **Duration of potential landscape impacts.** The duration of the potential impacts during construction and operation is determined based on the following ratings:

Temporary: Elements of the Project that will have an impact for a period of time (short, medium, long-term) but will disappear with minimal intervention or mitigation. Short-term impacts would disappear at an early stage in the construction or operational phase, medium term impacts would disappear part way through the construction or operational phase, and long-term impacts would disappear at a late stage through the construction or operational phase.

Permanent: Elements of the Project that will have permanent impacts during the construction and/or operational phases. These permanent impacts may be determined potentially reversible, or irreversible.

- **Identification of potential landscape mitigation measures.** These may take the form of adopting alternative designs or revisions to the basic engineering and architectural design to prevent and/or minimise adverse impacts; remedial measures such as colour and textural treatment of building features; and compensatory measures such as the implementation of landscape design elements (e.g. tree planting, creation of new open space, etc.) to compensate for unavoidable adverse impacts and to attempt to generate potentially beneficial long-term impacts. A programme for the mitigation measures is provided. The agencies responsible for the funding, implementation, management and maintenance of the mitigation measures are identified.
- **Prediction of the significance of landscape impacts** before and after the implementation of the mitigation measures. By synthesising the magnitude of the various impacts and the sensitivity of the various landscape resources, it is possible to categorise impacts in a logical, well-reasoned and consistent fashion. **Table 11.1** below shows the rationale for dividing the degree of significance, namely insubstantial, slight, moderate, and substantial, depending on the combination of a negligible-small-intermediate-large magnitude of change and a low-medium-high degree of sensitivity of landscape resource/character. The significances are defined as follows:

  Substantial: 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 existing landscape quality

  Insubstantial: No discernible change in the existing landscape quality

- **Prediction of Acceptability of Impacts.** An overall assessment of the acceptability, or otherwise, of the impacts according to the five criteria set out in Annex 10 of the EIAO-TM.

Table 11.1 Relationship between Receptor Sensitivity and Impact Magnitude in Defining Impact Significance

MAGNITUDE OF CHANGE	**Large**	Moderate	Moderate or Substantial	Substantial
	Intermediate	Slight or Moderate	Moderate	Moderate or Substantial
	Small	Slight	Slight or Moderate	Moderate
	Negligible	Insubstantial	Insubstantial	Insubstantial
		Low	**Medium**	**High**
	SENSITIVITY OF RECEIVER			

11.3.2.7 **Conclusion:** from an analysis of the significance thresholds derived for landscape (and visual) impacts, an overall conclusion in terms of impact significance for the Project is determined in accordance with the five evaluation criteria set out in Annex 10 of the EIAO-TM:

- **Beneficial:** The project impact is beneficial if it will complement the landscape and visual character of its setting, will follow the relevant planning objectives and will improve overall visual amenity.
- **Acceptable:** The project impact is acceptable if the assessment indicates that there will be no significant effects on the landscape, no significant visual effects caused by the appearance of the Project, or no interference with key views.
- **Acceptable with Mitigation Measures:** The project impact is acceptable with mitigation measures if there will be some adverse effects, but these can be eliminated, reduced or offset to a large extent by specific measures.
- **Unacceptable:** The project impact is unacceptable if the adverse effects are considered too excessive and are unable to be practically mitigated.
- **Undetermined:** The project impact is undetermined if 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 of the specific effects in question.

11.3.3 Methodology for Assessment of Visual Impacts

11.3.3.1 The assessment of visual impacts has involved the following procedures.

- **Identification of the Zones of Visual Influence (ZVI)** during the construction and operational phases of the Project. This is achieved by site visit and desktop study of topographic maps and photographs, and preparation of cross-sections to determine visibility of the Project from various locations.
- **Identification of the Visually Sensitive Receivers (VSRs)** within the ZVIs at construction and operational phases. These are the people who would reside within, work within, play within, or travel through, the ZVI.
- **Assessment of the degree of sensitivity to change of the VSRs.** Factors considered include: the type of VSR, which is classified according to whether the person is at home, at work, at play, or travelling. Those who view the impact from their homes are considered to be highly sensitive as the attractiveness or otherwise of the outlook from their home will have a substantial effect on their perception of the quality and acceptability of their home environment and their general quality of life. Those who view the impact from their workplace are considered to be only moderately sensitive as the attractiveness or otherwise of the outlook will have a less important, although still material, effect on their perception of their quality of life. The degree to which this applies depends on whether the workplace is industrial, retail or commercial. Those who view the impact whilst taking part in an outdoor leisure activity may display varying sensitivity depending on the type of leisure activity. Those who view the impact whilst travelling on a public thoroughfare will also display varying sensitivity depending on the speed of travel. For example, cyclists have a higher sensitivity due to a slower travel speed and heightened awareness of their surroundings resulting in pronounced and prolonged exposure to the visual impact.

- Other factors which are considered (as required by EIAO GN 8/2010) include the value and quality of existing views, the availability and amenity of alternative views, the duration or frequency of view, and the degree of visibility. The sensitivity of VSRs is classified as follows:

  High: The VSR is highly sensitive to any change in their viewing experience

  Medium: The VSR is moderately sensitive to any change in their viewing experience

  Low: The VSR is only slightly sensitive to any change in their viewing experience

- **Identification of the relative numbers of VSRs.** This is expressed in terms of whether there are very few, few, many or very many VSRs in any one category of VSR.
- **Identification of potential sources of visual impacts.** These are the various elements of the construction works and operational procedures that would generate visual impacts.

Assessment of Potential Magnitude of Visual Impacts

11.3.3.2 Visual impacts are determined by evaluating the conditions of the existing landscape and the visual character of the subject site and its surroundings, as well as the degree of integration of the proposed Project's components with the existing landscape. Other major factors affecting the magnitude of changes for assessing visual impacts are as follows:

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

11.3.3.3 The potential magnitude of change is classified into four categories:

Negligible: The VSRs are likely to suffer no discernible change in their viewing experience.

Small: The VSRs are likely to suffer a slight change in their viewing experience.

Intermediate: The VSRs are likely to suffer a moderate change in their viewing experience.

Large: The VSRs are likely to suffer a significant change in their viewing experience.

Determination of the Visual Impacts during Construction and Operational Phases Before and After Implementation of Mitigation Measures

11.3.3.4 The significance of the visual impacts is categorised as follows:

Insubstantial: No discernible change to the existing visual quality.

Slight: Adverse / beneficial impact where the proposed development would cause a barely perceptible deterioration/ improvement to existing visual quality.

Moderate: Adverse / beneficial impact where the proposed development would cause a noticeable deterioration/ improvement to existing visual quality.

Substantial: Adverse / beneficial impact where the proposed development would cause significant deterioration/ improvement to existing visual quality.

11.3.3.5 The impact significance will be determined. **Table 11.2** below shows the relationship between sensitivity and magnitude of change.

Table 11.2 Impact Significance Relationship between Sensitivity and Magnitude of Change

Magnitude of Change		Sensitivity / Quality		
		Low	**Medium**	**High**
	Large	Moderate	Moderate/Substantial	Substantial
	Intermediate	Slight/Moderate	Moderate	Moderate/Substantial
	Small	Slight	Slight/Moderate	Moderate
	Negligible	Insubstantial	Insubstantial	Insubstantial

11.3.3.6 The assessment of visual impacts will be presented in a matrix format considering the factors including location of VSRs, type and approximate number of VSRs, description of existing view and degree of visibility of the proposed development, receiver sensitivity, sources of visual impacts, minimum viewing distance of VSRs, magnitude of change, significance thresholds of potential visual impacts (before mitigation), mitigation measures and significance thresholds of residual impacts (upon mitigation) during operational phase on Day 1 and in Year 10.

Recommendation of Mitigation Measures to Minimise Adverse Visual Impacts

11.3.3.7 Mitigation strategies will be developed to reduce the overall visual impacts derived from the proposed development during construction and operational phases. The description in this text establishes the principles underlying the mitigation measures.

Prediction of Acceptability of Impacts

11.3.3.8 An overall assessment of the acceptability, or otherwise, of the impacts is stated according to the five criteria set out in Annex 10 of the EIAO-TM, namely beneficial, acceptable, acceptable with mitigation measures, unacceptable and undetermined.

11.4 Review of Planning and Development Control Framework

11.4.1 Review of Preliminary Outline Development Plan and Outline Zoning Plan

11.4.1.1 A review of the existing and planned development framework for the proposed works and for the surroundings has been considered. It aims at identifying issues for the neighbouring planned land uses, identifying potential resources and sensitive receivers, and ensuring a high compatibility between the proposed project and the surroundings.

11.4.1.2 The Study Area is covered by:

- Draft Tuen Mun Outline Zoning Plan No. S/TM/37
- Approved Lam Tei and Yick Yuen Outline Zoning Plan No. S/TM- LTYY/12

11.4.1.3 The alignment of TMB will encroach into “Green Belt”, “Government, Institution or Community” and “undetermined”, and area shown as “Road” in Pillar Point, and “Green Belt” and “other Specified Uses (QUARRY)” in Lam Tei, (**Figure 11.2.1**). The ventilation

building in Wah Fat Street will encroach into "Green Belt", "Government, Institution or Community", and "residential (Group B)".

11.4.1.4 The Conservation Area (CA) shown in OZP Nos. S/TM-LTYY/12 are located at the east outside of Lam Tei Quarry and connected with the Tai Lam Country Park Boundary. The CA zone is designated for protecting and retaining existing natural landscape, ecological, topographical and archaeological features of the area for conservation, educational and research purposes and to separate the sensitive environment such as Tai Lam Country Park from the adverse effects of development. All proposed works in Lam Tei of TMB are outside the Tai Lam Country Park (TLCP). The location of TLCP is shown in **Figure 11.2.1.**

11.4.1.5 According to the Town Planning Ordinance (Cap. 131), any works or use authorized under the Roads (Works, Use and Compensation) Ordinance (Cap. 370) shall be deemed to be approved. Since the proposed works under the Project will be authorized under the Roads (Works, Use and Compensation) Ordinance (Cap. 370), planning permission from Town Planning Board for the Project will not be required.

11.4.1.6 The review of OZPs has not only included a review of the plans, but also the Notes which form part of these plans and the Explanatory Statements which accompany the plans.

11.5 Landscape Baseline Study

11.5.1 Study Area

11.5.1.1 The Landscape Impact Assessment area is 100m from the Study Area, as stipulated in the **EIA Study Brief Clause 3.4.13.2**. This 100m landscape assessment area is illustrated in **Figure 11.3.1 to 11.3.6** and **Figure 11.5.1 to 11.5.6**.

11.5.2 Landscape Resources and Landscape Character Areas

11.5.2.1 The LRs and LCAs that will be affected during the Construction Phase and Operational Phase, together with their sensitivity, are described in **Table 11.3** and **Table 11.4**.

11.5.2.2 The locations of baseline LRs and LCAs are mapped in **Figure 11.3.1 to 11.3.6**, and **Figure 11.5.1 to 11.5.6** respectively. Photo views illustrating the LRs and LCAs within the study area are illustrated in **Figure 11.4.1 to 11.4.5** and **Figure 11.6.1 to 11.6.4** respectively. For the ease of reference and co-ordination between text, tables and figures, each LR and LCA are given an identity number.

11.5.2.3 The baseline LRs and LCAs within the LIA study area, together with their sensitivity, are described in **Table 11.3** and **Table 11.4** below. A total of six and seven of different LRs and LCAs are identified within the whole Study Area respectively, as bulleted below: -.

Landscape Resources (LRs)

- Secondary woodland
- Plantations
- Shrublands
- Watercourse

- Developed Area
- Playground
- Seawater Body

Landscape Character Areas (LCAs)

- Upland Fringe Landscape
- Rural Landscape
- Upland Landscape
- Highway Corridor Landscape
- Residential Urban Landscape
- Mixed Modern institutional Urban Landscape
- Mixed Modern Industrial Urban Landscape
- Maritime Landscape

Table 11.3 Landscape Resources and Their Sensitivity to Change

ID. No.	Landscape Resources	Sensitivity (Low, Medium, High)
Southern Interchange in Pillar Point		
LR-PP2	**Plantations in Pillar Point** This LR refers to the plantation in Pillar Point in the vicinity of Siu Lang Shui. This LR is about 26.8 ha. It is estimated that there is approximate 5,500 nos. trees with the 100m Landscape Impact Assessment area. The area consists of tall shrubland and disturbed hillside plantation. The trees are mostly of medium to tall size and of low amenity value. Dominant tree species include *Acacia auriculiformis, Acacia confusa, Adinandra millettii, Bauhinia variegata, Bombax ceiba, Cassia siamea, Casuarina equisetifolia, Celtis sinensis, Dimocarpus longan, Eucalyptus citriodora, Eucalyptus torreliana, Ficus hispida, Ficus microcarpa, Leucaena leucocephala, Litchi chinensis, Litsea glutinosa, Lophostemon confertus, Macaranga tanarius, Mangifera indica, Melia azedarach, Michelia* x *alba, Plumeria rubra, Psidium guajava, Rhus succedanea, Sapium sebiferum, Schefflera heptaphylla, Sterculia lanceolata* and *Tetradium glabrifolium.* Trees of Particular interest (TPI) is identified in reference to the definition in the Guidelines for Tree Risk Assessment and Management Arrangement issued by DEVB. It is a *Ficus elastica* (印度榕), with 15m height, 2000mm DBH, 18m spread. This tree is in mature size with a number of aerial roots are located on slope. (refer to **Appendix 11.1** for details)	Medium

ID. No.	Landscape Resources	Sensitivity (Low, Medium, High)
	The quality of this resource is **Medium**, and the ability of this resources to accommodate change is **Medium**. The sensitivity of this landscape resource is considered as **Medium**.	
LR-PP4	**Shrublands in Pillar Point** This LR refers to the shrublands on engineered slopes which provides a visual green backdrops along the infrastructure roads. This LR is about 6.6 ha. It is estimated that there is approximate 350 nos. trees with the 100m Landscape Impact Assessment area. The shrubland is densely populated with common shrub species of medium amenity value. There is a small area of *Nepenthes mirabilis* which is listed as a protected species under Cap 96 of Forests and Countryside Ordinance. The trees and other vegetation provide an important landscape and visual identity and character to Pillar Point. Considering the large number of native trees (e.g. *Celtis* spp., *Ficus* spp., *Sapium* spp., *Schefflera* spp., *Sterculia* spp. etc.) and extensive shrubland. The quality of this resource is **Medium**, and the ability of this resources to accommodate change is **High**. The sensitivity of this landscape resource is considered as **Medium**.	Medium
LR-PP10	**Seawater Body in Pillar Point** This LR covers approximately 2.2 ha within the 100m landscape assessment area. This LR refers to the coastal and maritime areas in Pillar Point. The shoreline of this LR is characterized by the artificial seawall. Given the engineered nature of this LR, its sensitivity is generally considered to be l**ow**.	Low
LR-PP11	**Developed Area in Pillar Point** This LR refers to the vegetated areas associated to the developed area in Pillar Point. This LR is about 41.4 ha. No registered OVT is identified within this LR. It is estimated that there is approximate 1,400 nos. trees with the 100m Landscape Impact Assessment area. Dominant species is *Leucaena leucocephala* which is a weed tree of low amenity value. There are also other common trees such as *Acacia confusa*, *Bauhinia variegata*, *Bombax ceiba*, *Cassia siamea*, *Celtis sinensis*, *Ficus microcarpa*, *Hibiscus tiliaceus* and *Melaleuca quinquenervia*. The quality of this resource is **Low**, and the ability of this resources to accommodate change is **High**. The sensitivity of this landscape resource is considered as **Low**.	Low
Middle Ventilation Building		
LR-TM1	**Secondary Woodland in Tuen Mun** This LR covers an area of approximately 2.8 ha within the 100m landscape assessment area. This LR refers to the woodland in the	High

ID. No.	Landscape Resources	Sensitivity (Low, Medium, High)
	Tai Lam Country Park, and a patches of woodland located around Sam Shing Temple. It is estimated that there is approximate 800 nos. trees with the 100m Landscape Impact Assessment area. The main species in this LR include a combination of exotic plantation species such as Taiwan Acacia (*Acacia confusa)*, Brisbane Box (*Lophostemon confertus)*, Chinese Red Pine *(Pinus massoniana)*, Slash Pine (*Pinus elliottii)* and Swamp Mahogany (*Eucalyptus robusta)*. These areas also include some common native species such as Castanopsis *(Castanopsis fissa)*, Oak *(Quercus* spp.*)* and Machilus *(Machilus* spp.*)*. Due to the vicinity to village houses and main roads, woodlands at Sam Shing Hui along Tuen Mun Road receive a relatively higher level of disturbance, especially on their fringes. While woodland patches within the Tai Lam Country Park are more mature. No registered OVT is identified within the 100m landscape assessment area. Generally, this LR is considered to form an important part of the overall landscape context and so its sensitivity is considered to be **High**.	
LR-TM2	**Plantations in Tuen Mun** This LR covers an area of approximately 5.9 ha within the 100m landscape assessment area. This LR refers to the plantation on engineered slopes in Wah Fat Street. It is estimated that there is approximate 1,000 nos. trees with the 100m Landscape Impact Assessment area. Common trees identified in the engineered slopes, namely, *Acacia confusa*, *Celtis sinensis*, *Eucalyptus tereticornis*, *Lophostemon confertus* and *Sterculia lanceolata*, generally in semi-mature to mature size, with an average form and health condition. Generally, this LR is considered to form an important part of the overall landscape context and so its sensitivity is considered to be **High**.	High
LR-TM11	**Developed Area in Tuen Mun** This LR covers an area of approximately 11.1 ha within the 100m landscape assessment area. It is estimated that there is approximate 250 nos. trees with the 100m Landscape Impact Assessment area. This LR refers to the ornamental and amenity tree and shrub planting identified in Alpine Garden, Harvest Garden, and Hoi Tak Garden. Generally, the condition of these amenity planting is in good condition. The quality of this resource is **High**, but this LR is a common resources. The sensitivity of this LR is considered as **Medium**.	Medium

ID. No.	Landscape Resources	Sensitivity (Low, Medium, High)
LR-TM13	**Playground in Wah Fat Street** This LR covers an area of approximately 0.5 ha within the 100m landscape assessment area. This LR is a public open space in Wah Fat Street. It is estimated that there is approximate 50 nos. trees with the 100m Landscape Impact Assessment area. It is bounded by slope planting and provides a resting garden for the residents nearby. It provides various recreational facilities to the residents, including children's play area, basketball courts, jogging path, etc. Ornamental trees and shrub planting are found in the park. No registered OVT is identified. It is a common landscape resource. The quality of this resource is **Medium** and the ability of this resource to accommodate changes is **Medium**. The sensitivity of this LR is considered as **Medium**.	Medium
Northern Interchange in Lam Tei Quarry		
LR-LT1	**Secondary Woodlands in Lam Tei** This LR covers an area of approximately 1.3 ha within the 100m landscape assessment area. This LR refers to the woodland located in Lam Tei Quarry, with the main patches located on the lower hillslopes to the north of Tai Lam Country Park (TLCP) and south of the alignment along Yuen Long Highway. It is estimated that there is approximate 200 nos. trees with the 100m Landscape Impact Assessment area. Some woodland patches also fall within the fringe area of TLCP. The main species in this LR include a combination of exotic plantation species such as Taiwan Acacia (*Acacia confusa)*, Brisbane Box (*Lophostemon confertus)*, Chinese Red Pine *(Pinus massoniana)*, Slash Pine (*Pinus elliottii)* and Swamp Mahogany (*Eucalyptus robusta)*. These areas also include some common native species such as Castanopsis *(Castanopsis fissa)*, Oak *(Quercus* spp.*)* and Machilus *(Machilus* spp.*)*. No registered OVT is identified within the 100m landscape assessment area. Generally, this LR is considered to form an important part of the overall landscape context and so its sensitivity is considered to be **High**.	High
LR-LT2	**Plantations in Lam Tei** This LR covers an area of approximately 4.9 ha within the 100m landscape assessment area and together with the local topography, is influential in forming the landscape character and amenity of the local area. It is estimated that there is approximate 400 nos. trees with the 100m Landscape Impact Assessment area. Dominant species	Medium

ID. No.	Landscape Resources	Sensitivity (Low, Medium, High)
	including planted trees and shrubs as well as natural growth, such as Camel's Foot Tree (*Bauhinia variegata*), Queen Crape Myrtle (*Lagerstroemia speciosa*), Elephant's Ear (*Macaranga tanarius* var. *tomentosa*), Opposite-leaved Fig (*Ficus hispida*) and the Chinese Banyan (*Ficus microcarpa*). The invasive weed White Popinac (*Leucaena leucocephala*) could also be found. No registered OVT is identified within the 100m landscape assessment area. Despite some non-native species composition, this LR contributes to the overall landscape character and its importance in screening unsightly activities. Thus, the sensitivity of this LR being considered to be **Medium**.	
LR-LT7	**Watercourses in Lam Tei** This LR represents the streams with approximately 160m total length found within the 100m landscape assessment area. This LR refers to the streams in Lam Tei, which emanating from Lam Tei Irrigation reservoir. Dominant species identified in the riparian zones include shrubs species like the Shining Eurya (*Eurya nitida*), Thin Evodia (*Melicope pteleifolia*) and Dwarf Mountain Pine (*Baeckea frutescens*). No registered OVT is identified within the 100m landscape assessment area. Given the existing condition of the watercourses which make up this LR, its sensitivity is considered to be **Medium**.	Medium
LR-LT11	**Developed Areas in Lam Tei** This LR covers approximately 3 ha within the 100m landscape assessment area. Development in this LR involves storage and workshop, and the disturbed landscape of Lam Tei Quarry. It is estimated that there is approximate 20 nos. trees with the 100m Landscape Impact Assessment area. The developed areas in Lam Tei supports a limited floral species due to intensive human disturbance. Dominant species include Paper-bark Tree (*Melaleuca cajuputi* subsp. *cumingiana*), Chinese Red Pine (*Pinus massoniana*) and the Many-flowered Silvergrass (*Miscanthus floridulus*). No registered OVT is identified within the 100m landscape assessment area. Given the developed nature of this LR, the sensitivity of this LR is considered to be **Low**.	Low
Northern landfall of Tuen Mun – Chek Lap Kok Tunnel		
LR-NL2	**Plantations in Northern Landfall** This LR covers approximately 4.6 ha within the 100m landscape assessment area. This LR refers to the plantation in the northern	Medium

ID. No.	Landscape Resources	Sensitivity (Low, Medium, High)
	landfall of the Tuen Mun – Chek Lap Kok Tunnel. It is estimated that there is approximate 600 nos. trees with the 100m Landscape Impact Assessment area. The dominant species in this LR include *Archontophoenix alexandrae, Plumeria rubra, Roystonea regia, Livistona chinensis, Wodyetia bifurcate, Terminalia catappa, and Pongamia pinnata.* No registered OVT is identified within this LR. It is a common landscape resource. The quality of this resources is medium and the ability of this resources to accommodate changes high. Despite some non native and common species composition, this LR contributes to the overall landscape character and its importance in screening unsightly activities. Thus, the sensitivity of this LR being considered to be **Medium**.	
LR-NL10	**Seawater Body at Northern Landfall** This LR covers approximately 20.9 ha within the 100m landscape assessment area. This LR refers to the coastal and maritime areas at Northern Landfall of Tuen Mun – Chek lap Kok Tunnel. The shoreline of this LR is characterized by the artificial seawall. Given the engineered nature of this LR, its sensitivity is generally considered to be **low**.	Low
LR-NL11	**Developed Area in Northern Landfall** This LR covers approximately 19.2 ha within the 100m landscape assessment area. This LR refers to the warehouse and storage area in Northern Landfall. There only some undesirable species identified in this area . It is estimated that there is approximate 150 nos. trees with the 100m Landscape Impact Assessment area. No registered OVT is identified within the 100m landscape assessment area. Given the developed nature of this LR, the sensitivity of this LR is considered to be **Low**.	Low

Table 11.4 Landscape Character Areas and Their Sensitivity to Change

ID. No.	Landscape Characters Areas	Sensitivity (Low, Medium, High)
Southern Interchange in Pillar Point		
LCA-PP2	**Pillar Point Upland Fringe Landscape** This LCA covers an area of approximately 31.1 ha within the study area. This is upland and hillside fringe area in Siu Lang Shui. The area is dominated with tall shrubland and plantation of medium amenity value. The area is predominantly undeveloped with occasional small buildings. The landscape is very sensitive to highway development. Given the relative undeveloped nature of the area and medium amenity value of the trees and other vegetation, the sensitivity of this natural area is considered as **Medium**.	Medium
LCA-PP10	**Lung Mun Road Highway Corridor Landscape** This LCA covers an area of approximately 22.5 ha within the study area. This LCA refers to the Lung Mun Road and the Lung Fu Road highway corridor, in which the roadside plantation act as a green buffer. Given the urbanized nature of the area and green buffer nature and the amenity value of the roadside planting, the sensitivity of this area is considered as **Medium**.	Medium
LCA-PP12	**Pillar Point Mixed Modern Institutional Urban Landscape** This LCA covers an area of approximately 17.6 ha within the study area. This LCA refers to the institutional use in Pillar Point. The low or medium rise developments are predominantly institutional-related, namely, Pillar Point Sewage Treatment Works, Customs and Excise Department, and Pillar Point Fire Station. There are patches of tree planting of low to medium amenity value. Given the urbanized nature of the area and the medium amenity value of tree planting, the sensitivity of this urbanized area is considered as **Low**.	Low
LCA-PP13	**Pillar Point Mixed Modern Industrial Urban Landscape** This LCA covers an area of approximately 5.9 ha within the study area. The low or medium rise developments are predominantly industrial and port-related. There are a few patches of tree planting of low amenity value. Given the urbanized nature of the area and the low amenity value of tree planting, the sensitivity of this urbanized area is considered as **Low**.	Low

ID. No.	Landscape Characters Areas	Sensitivity (Low, Medium, High)
Middle Ventilation Building		
LCA-TM2	**Tuen Mun Upland Fringe Landscape** This LCA covers an area of approximately 6.3 ha within the Study Area. This LCA is at an elevation of approximately +20.0mPD to +80.0mPD, which generally comprises of covered with slope planting on engineered slope. The Wah Fat Playground is located within this LCA. The quality of this LCA is **High**, and the ability of this LCA to accommodate changes is **Low**. The sensitivity to change is assessed as **High**.	High
LCA-TM4	**Tuen Mun Upland Landscape** This LCA covers an area of approximately 1.4 ha within the Study Area. This LCA falls within the Tai Lam Country Park, and with the Maclehose Trail (Stage 10). It is generally covered with hillside woodland, with seasonal rocky streams tumble down these hillsides. This LCA is at an elevation of over approximately +80.0mPD, and within the MacLehose Trail Sec. 10. The naturalistic character of these landscape features is considered to have a high quality, and their sensitivity to change is assessed as **High**.	High
LCA-TM11	**Tuen Mun Residential Urban Landscape** This LCA covers an area of approximately 12.6 ha within the Study Area. This LCA comprises high-rise private residential developments. Amenity landscape facilities are identified within these residential developments. This LCA has medium ability to accommodate change. The sensitivity is considered as **Medium**.	Medium
Northern Interchange in Lam Tei Quarry		
LCA-LT2	**Lam Tei Upland Fringe Landscape** This LCA covers an area of approximately 1.6 ha within the 100m landscape assessment area, and ranges in height from +20.0mPD to +40.0mPD. This LCA is formed by a combination of wooded hill slopes, works area around Lam Tei Quarry and scattered low-intensity village developments at Lo Fu Hang and Fu Tei Ha Tsuen. No registered OVT is identified within the 100m landscape assessment area. Given the disturbed nature of the existing landscape, the quality of this LCA is considered to be **Medium** and the sensitivity of this LCA to change is assessed as **Medium**.	Medium

ID. No.	Landscape Characters Areas	Sensitivity (Low, Medium, High)
LCA-LT3	**Lam Tei Rural Landscape** This LCA covers an area of approximately 5.2 ha within the 100m landscape assessment area, and ranges in elevation from +20.0mPD to +100.0mPD. This LCA is located to the west of Lam Tei Tunnel and comprises single storey dwellings set within a landscape of traditional strip fields, small orchards and specimen trees. The southern portion of this LCA is dominated by the Lam Tei Quarry with its disturbed landscape and terraced slopes with tree planting as part of the rehabilitation approach. No registered OVT is identified within the 100m landscape assessment area. As a result of its developed nature, the quality of this LCA is considered to be medium and its overall sensitivity to change is assessed as **Medium**.	Medium
LCA-LT4	**Lam Tei Upland Landscape** This LR covers an area of approximately 2.5 ha within the 100m landscape assessment area. This LCA is at an elevation of approximately +20.0mPD to +120.0mPD. Part of this LCA falls within the TLCP. It is generally covered a with hillside woodland. No registered OVT is identified within the 100m landscape assessment area. The naturalistic character of these landscape features is considered to have a high quality, and their sensitivity to change is assessed as **High**.	High
Northern landfall of Tuen Mun – Chek Lap Kok Tunnel		
LCA-NL8	**Northern Landfall Maritime landscape** This LCA covers approximately 20.9 ha within the 100m landscape assessment area. This LCA refers to the maritime character at Northern Landfall of Tuen Mun – Chek lap Kok Tunnel. The shoreline of this LR is characterized by the artificial seawall. This LCA has high ability to accommodate change. The sensitivity is considered as low.	Low
LCA-NL10	**Northern Landfall Highway Corridor Landscape** This LCA covers approximately 4.6 ha within the 100m landscape assessment area. This LCA is characterised by the vegetation cover over the Northern Landfall of Tuen Mun Chek Lap Kok Tunnel, and forms a greenery buffer in Northern landfall. This type of LCA is common to Hong Kong. It has high ability to accommodate changes. Given the screening green buffer effect, the sensitivity of this LCA is considered as medium.	medium
LCA-NL13	**Northern Landfall Mixed Modern Industrial Urban Landscape** This LCA covers an area of approximately 19.2 ha within the study	low

ID. No.	Landscape Characters Areas	Sensitivity (Low, Medium, High)
	area. The low or medium rise developments are predominantly industrial and port-related. Given the urbanized nature of the area and the low landscape character value of this LCA, the sensitivity of this urbanized area is considered as **Low**.	

11.5.2.4 The sensitivity of all identified LRs and LCAs within the 100m Landscape Assessment Area are summarised in **Table 11.5** and **Table 11.6** below.

Table 11.5 Sensitivity of Identified Landscape Resources

ID No.	Descriptions	Quality of existing landscape (Low / Medium /High)	Importance / Rarity of landscape elements (Low / Medium / High)	Ability to accommodate change (Low / Medium / High)	Maturity of Landscape (Young / Semi-mature / Mature)	Sensitivity (Low / Medium / High)
Southern Interchange in Pillar Point						
LR-PP2	Plantations in Pillar Point	Medium	Medium / medium	Medium	Mature	Medium
LR-PP4	Shrublands in Pillar Point	Medium	Low / Low	High	Mature	Medium
LR-PP10	Seawater Body in Pillar Point	Medium	Medium/low	High	Not applicable	Low
LR-PP11	Developed Area in Pillar Point	Low	Low / Low	High	Mature	Low
Middle Ventilation Building						
LR-TM1	Secondary Woodland in Tuen Mun	High	High / Medium	Low	Mature	High
LR-TM2	Plantations in Tuen Mun	High	High / Medium	Low	Mature	High
LR-TM11	Developed Area in Tuen Mun	High	Medium / Low	High	Mature	Medium
LR-TM13	Playground in Wah Fat Street	Medium	Medium / Low	Medium	Mature	Medium
Northern Interchange in Lam Tei Quarry						
LR-LT1	Secondary Woodlands in Lam Tei	High	High / High	Low	Mature	High
LR-LT2	Plantations in Lam Tei	High	High / Medium	Low	Mature	medium
LR-LT7	Watercourses in Lam Tei	Medium	Medium / Medium	Low	Mature	Medium
LR-LT11	Developed Area in Lam Tei	Low	Low / Low	High	Mature	Low
Northern landfall of Tuen Mun – Chek Lap Kok Tunnel						
LR-NL2	Plantations in Northern Landfall	Medium	Medium / low	High	Mature	medium
LR-NL10	Seawater Body at Northern Landfall	Medium	Medium/low	High	Not applicable	Low

ID No.	Descriptions	Quality of existing landscape (Low / Medium /High)	Importance / Rarity of landscape elements (Low / Medium / High)	Ability to accommodate change (Low / Medium / High)	Maturity of Landscape (Young / Semi-mature / Mature)	Sensitivity (Low / Medium / High)
LR-LT11	Developed Area In Northern Landfall	Low	Low /low	high	Mature	Low

Table 11.6 Sensitivity of Identified Landscape Character Areas

ID No.	Descriptions	Quality of existing landscape (Low / Medium / High)	Importance / Rarity of landscape elements (Low / Medium / High)	Ability to accommodate change (Low/medium / High)	Maturity of Landscape (Young / semi mature/mature)	Sensitivity (Low / medium / high)
Southern Interchange in Pillar Point						
LCA-PP2	Pillar Point Upland Fringe Landscape	Medium	Medium / Low	Medium	Mature	Medium
LCA-PP10	Lung Mun Road Highway Corridor Landscape	Medium	Medium / Low	Medium	Mature	Medium
LCA-PP12	Pillar Point Mixed Modern Institutional Urban Landscape	Medium	Low / Low	High	Mature	Low
LCA-PP13	Pillar Point Mixed Modern Industrial Urban Landscape	Medium	Low / Low	High	Mature	Low
Middle Ventilation Building						
LCA-TM2	Tuen Mun Upland Fringe Landscape	High	High / Medium	Low	Mature	High
LCA-TM4	Tuen Mun Upland Landscape	High	High / Medium	Low	Mature	High
LCA-TM11	Tuen Mun	Medium	Medium / Low	Medium	Mature	Medium

ID No.	Descriptions	Quality of existing landscape (Low / Medium / High)	Importance / Rarity of landscape elements (Low / Medium / High)	Ability to accommodate change (Low/medium / High)	Maturity of Landscape (Young / semi mature/mature)	Sensitivity (Low / medium / high)
	Residential Urban Landscape					
Northern Interchange in Lam Tei Quarry						
LCA-LT2	Lam Tei Upland Fringe Landscape	Medium	Medium / Medium	Medium	Mature	Medium
LCA-LT3	Lam Tei Rural Landscape	Medium	Low / Low	Medium	Mature	Medium
LCA-LT4	Lam Tei Upland Landscape	High	High / Medium	Low	Mature	High
Northern landfall of Tuen Mun – Chek Lap Kok Tunnel						
LCA-NL8	Northern Landfall Maritime landscape	Medium	Medium / low	High	Mature	low
LCA-NL10	Northern Landfall Highway Corridor Landscape	Medium	Medium / low	High	Mature	medium
LCA-NL13	Northern Landfall Mixed Modern Industrial Urban Landscape	Low	Low / Low	High	Mature	Low

11.6 Visual Baseline Study

11.6.1 Visual Envelope and Zones of Visual Influence

11.6.1.1 The Study Area for the Visual Impact Assessment (VIA) is identified by the visual envelope for the Project in accordance with EIAO GN No. 8/2010. The visual envelope (zone of visual influence) is generally defined as the view shed formed by natural or manmade features such as vegetation, landform and/or built development and contains areas which are fully, partially visible, glimpsed or unseen from the TMB and its associated works. The extent of the Visual Envelope (VE) is illustrated in **Figure 11.7.1 to 11.7.3**.

11.6.1.2 Two visual envelopes are identified in the project. The southern Interchange in Pillar Point and the Northern Interchange in Lam Tei are as illustrated in **Figure 11.7.1**, **Figure 11.7.2** and **Figure 11.7.3** respectively.

11.6.1.3 Visual Envelope (VE) is the zone of visual influence which is generally the viewshed formed by natural or man-made features such as ridgeline or building blocks. Visual envelope of the southern interchange in Pillar Point and the Middle Ventilation Building are bounded by the ridgeline of Tai Lam Country Park to the east, the high-rise residential in Tuen Mun and along Hoi Wing Road, and the ridgeline in Siu Lang Shui (**Figure 11.7.1**)) to the north; medium-rise building in Chek Lap Kok, Hong Kong Boundary Crossing Facilities and Siu Ho Wan Depot to the south (**Figure 11.7.1**)).

11.6.1.4 Visual Envelope (VE) of the Northern Section is bounded by Yuen Long Highway to the north, and a combination of villages and low-to-high-rise developments to the west; and contained by the Kung Um Shan range of hills and ridgeline to the east, and by the hills of the Lam Tei Quarry to the south (**Figure 11.7.3**).

11.6.2 Visual Resources

11.6.2.1 The major visual resources within the visual envelope include the ridgeline of the Tai Lam Country Park, green backdrop of Siu Lang Shui, and the Urmston Road.

11.6.2.2 The ridgeline of the Siu Lang Shui and the Tai Lam Country Park provides a dramatic natural backdrop to the area, which forms the valuable natural visual resources as viewed from the Tuen Mun Town Center.

11.6.2.3 The Castle Peak Bay is an unique public asset and natural visual resource of Lantau, providing an open seascape along the northern coast of Lantau Island and the south coast of Tuen Mun.

11.6.3 Visually Sensitive Receivers (VSRs)

11.6.3.1 There are no vantage points identified in the Urban Design Guidelines under Hong Kong Planning Standards and Guidelines.

11.6.3.2 The type of VSRs is classified according to whether the person is at home, at work, at play, or travelling. Those who view the impact from their homes are considered to be highly sensitive as the attractiveness or otherwise of the outlook from their home will have a substantial effect on their perception of the quality and acceptability of their home environment and their general quality of life. Those who view the impact from their workplace are considered to be only moderately sensitive as the attractiveness or otherwise of the outlook will have a less important, although still material, effect on their perception of their quality of life. The degree to which this applies depends on whether the workplace is industrial, retail or commercial. Those who view the impact whilst taking part in an outdoor leisure activity may display varying sensitivity depending on the type of leisure activity. Those who view the impact whilst travelling on a public thoroughfare will generally have low sensitivity.

11.6.3.3 The sensitivity of the VSRs shall also be determined by numbers of the individuals within the VSR category, the quality of existing views, availability of alternative views, minimum distance between VSRs and impact source, degree of visibility, duration of view and frequency of view.

Southern Interchange in Pillar Point and Middle Ventilation Building

11.6.3.4 The main representative visually sensitive receivers (VSRs) for the southern section in Pillar Point are indicated on **Figure 11.7.1 to 11.7.2** summarised in **Table 11.7**.

11.6.3.5 The VSRs selected for this section include the following:

- VSR-TM1 – Residents of Alpine Garden, Rainbow Garden, Kam Fai Garden, Harvest Garden and Hoi Tak Garden;
- VSR-TM2 – Residents of Seaview Garden;
- VSR-TM3 – Residents of Pearl Island Garden;
- VSR-TM4 – Visitors at Tuen Mun Promenade;
- VSR-TM5 – Visitors at Hong Kong Gold Coast Dolphin Square;
- VSR-TM6 – Maritime Travelers to / from Tuen Mun Ferry Terminal;
- VSR-TM7 – Vehicle Travelers at Tuen Mun Road;
- VSR-TM8 – Recreational Users of Tsing Sin Playground;
- VSR-TM9 – Recreational Users of Wah Fat Garden;
- VSR-TM10 – Travelers of Wah Fat Street
- VSR-TM11 – Hikers of MacLehose Trail Section 10;
- VSR-TM12 – Visitors of Sam Shing Temple in Castle Peak Road – Castle Peak Bay;
- VSR-PP1 – Vehicle Travelers at Lung Mun Road ;
- VSR-PP2 – Workers at EMSD Tuen Mun Vehicle Servicing Station and DSD Pillar Point STW;
- VSR-PP3 – Workers at River Trade Terminal;
- VSR-PP4 – Workers at Tuen Mun Area 40;
- VSR-PP6 - Recreational Users of Butterfly Beach Park;

- VSR-NL1 – Workers and Travelers at Hong Kong International Airport;
- VSR-NL2 – Travelers at Hong Kong Boundary Crossing Facilities;
- VSR-NL3 – Workers and Future Residents at MTR Siu Ho Wan Depot.

Northern Interchange in Lam Tei Quarry (Figure 11.7.3)

11.6.3.6 The main representative visually sensitive receivers (VSRs) for the Northern interchange in Lam Tei Quarry are indicated on **Figure 11.7.3**, and summarised in **Table 11.7**. The representative VSRs are located in publicly accessible locations comprising recreational visitors and vehicular travellers, although existing views from these locations also feature some existing elevated road structures. South of the Yuen Long Highway, views are likely to be contained by the existing woodland and the sides of Lam Tei Quarry. Trail Walkers near Lam Tei Irrigation Reservoir may also have limited views to the proposed Northern interchange.

11.6.3.7 The VSRs selected for this section include the following (**Figure 11.7.3**):

- VSR-LT1 – Residents of Lo Fu Hang and Fu Tei Ha Tsuen;
- VSR-LT2 – Vehicle Travelers on Yuen Long Highway (Eastbound);
- VSR-LT3 – Trail Walkers on Fu Tei Country Trail and Lam Tei Irrigation Reservoir.
- VSR-LT4 – Visitor of Nam On Fat Tong in Fu Fuk Road
- VSR-LT5 – Recreational users of Fuk Hang Tsuen Basketball Court;
- VSR-LT6 – Travelers of Fuk Hang Tsuen Road .

Table 11.7 Visual Sensitive Receivers (VSRs) and Their Sensitivity to Change

VSR ID	Visually Sensitive Receiver (VSR)	VSR Type and Number (Very Few, Few, Many, Very Many)	Quality of Existing Views (Good, Fair, Poor)	Duration of View (Transient / Permanent Receiver)	Alternate Views and Amenity (Poor, Fair, Good)	Frequency of View (Very Frequent, Frequent, Occasional, Rare)	Degree of Visibility (Full, Partial, Glimpsed, No View)	Sensitivity (Low / Medium / High)
Southern Interchange in Pillar Point								
VSR-TM1	Residents of Alpine Garden, Rainbow Garden, Kam Fai Garden, Harvest Garden and Hoi Tak Garden	Residents / Many	Good	Permanent	Yes (Good)	Occasional	Partial	Medium
VSR-TM2	Residents of Seaview Garden	Residents / Many	Good	Permanent	Yes (Good)	Occasional	Partial	Medium
VSR-TM3	Residents of Pearl Island Garden	Residents / Many	Good	Permanent	Yes (Good)	Rare	Glimpsed	Medium
VSR-TM4	Visitors at Tuen Mun Promenade	Recreational / Many	Good	Permanent	Yes (Good)	Occasional	Partial	High
VSR-TM5	Visitors at Hong Kong Gold Coast Dolphin Square	Visitors / Many	Good	Permanent	Yes (Good)	Rare	Partial	High
VSR-TM6	Maritime Travelers to / from Tuen Mun Ferry Terminal	Travellers / Many	Good	Transient	Yes (Good)	Rare	Glimpsed	Medium
VSR-TM7	Vehicle Travelers at Tuen Mun Road	Travellers / Many	Poor	Transient	Poor	Rare	Glimpsed	Low
VSR-TM8	Recreational Users of Tsing Sin Playground	Recreational / few	Fair	Transient	Yes (fair)	Occasional	Partial	medium
VSR-TM9	Recreational Users of Wah Fat Garden	Recreational / few	Fair	Transient	Yes (good)	Occasional	Partial	Medium
VSR-TM10	Travelers of Wah Fat Street	Travellers / few	Fair	Transient	Poor	Rare	Glimpsed	Low
VSR-TM11	Hikers of MacLehose Trail Section 10	Recreational / Few	Good	Transient	Yes (Good)	Rare	Partial	High

VSR ID	Visually Sensitive Receiver (VSR)	VSR Type and Number (Very Few, Few, Many, Very Many)	Quality of Existing Views (Good, Fair, Poor)	Duration of View (Transient / Permanent Receiver)	Alternate Views and Amenity (Poor, Fair, Good)	Frequency of View (Very Frequent, Frequent, Occasional, Rare)	Degree of Visibility (Full, Partial, Glimpsed, No View)	Sensitivity (Low / Medium / High)
VSR-TM12	Visitors of Sam Shing Temple in Castle Peak Road – Castle Peak Bay	Visitors / few	Fair	Transient	Yes (Good)	Rare	Partial	Medium
VSR-PP1	Vehicle Travelers at Lung Mun Road	Travellers / Many	Poor	Transient	Poor	Rare	Glimpsed	Low
VSR-PP2	Workers at EMSD Tuen Mun Vehicle Servicing Station and DSD Pillar Point STW	Workers / Few	Good	Permanent	Yes (Good)	Occasional	Partial	Medium
VSR-PP3	Workers at River Trade Terminal	Workers / Many	Good	Permanent	Yes (Good)	Occasional	Partial	Medium
VSR-PP4	Workers at Tuen Mun Area 40	Workers / Many	Good	Permanent	Yes (fair)	Occasional	Partial	Medium
VSR-PP6	Recreational Users of Butterfly Beach Park	Recreational / Many	Good	Transient	Yes (Good)	Occasional	Partial	High
VSR-NL1	Workers and Travelers at Hong Kong International Airport	Travellers / Many	Good	Transient	Good	Occasional	Glimpsed	Medium
VSR- NL2	Travelers at Hong Kong Boundary Crossing Facilities	Travellers / Few	Good	Transient	Good	Occasional	Glimpsed	Low
VSR- NL3	Workers and Future Residents at MTR Siu Ho Wan Depot	Workers, Residents/ Many	Good	Permanent	Good	Occasional	Partial	Medium
Northern Interchange in Lam Tei Quarry								
VSR-LT1	Residents of Lo Fu Hang and Fu Tei Ha Tsuen	Residents / Few	Fair	Permanent	Yes (Fair)	Frequent	Partial	High

VSR ID	Visually Sensitive Receiver (VSR)	VSR Type and Number (Very Few, Few, Many, Very Many)	Quality of Existing Views (Good, Fair, Poor)	Duration of View (Transient / Permanent Receiver)	Alternate Views and Amenity (Poor, Fair, Good)	Frequency of View (Very Frequent, Frequent, Occasional, Rare)	Degree of Visibility (Full, Partial, Glimpsed, No View)	Sensitivity (Low / Medium / High)
VSR-LT2	Vehicle Travellers on Yuen Long Highway (Eastbound)	Travellers / Many	Fair	Transient	Yes (Fair)	Occasional	Glimpsed	Low
VSR-LT3	Trail Walkers on Fu Tei Country Trail and Lam Tei Irrigation Reservoir	Recreational / Few	Good	Transient	Yes (Good)	Rare	Partial	High
VSR-LT4	Visitor of Nam On Fat Tong in Fu Fuk Road	Visitors / few	Fair	Transient	Yes (Good)	Rare	Partial	Medium
VSR-LT5	Recreational users of Fuk Hang Tsuen Basketball Court	Recreational / Few	Fair	Transient	Yes (Good)	Rare	Partial	Medium
VSR-LT6	Travelers of Fuk Hang Tsuen Road	Travellers / few	Fair	Transient	Yes (Fair)	Occasional	Partial	Low

11.7 Landscape Impact Assessment

11.7.1 Sources of Landscape Impact

11.7.1.1 During the construction period, the proposed works may give rise to the following sources of temporary and reversible construction phase impacts:

- The commencement of construction activities and their impact on the existing site (e.g. site clearance / removal of existing vegetation / vegetated surface and conversion to bare soil, gravel or hard paved surface, site formation and excavation works, presence of construction equipment, machinery and plant, temporary storage of construction materials, setting up of construction site offices, parking and yards, and night-time security lighting etc.);
- Modification of the existing landform to accommodate the development proposals including the introduction of new embankments, cuttings, tunnel portals and bridges;
- Loss of vegetation, particularly trees and shrubs;
- Impacts arising from the presence of incomplete (partly constructed without proposed decorative finishes and greening etc.) construction; and
- Construction traffic near the alignment within the Works Area.
- Middle Ventilation Building is proposed next to the Wat Fat Playground. Wat Fat Playground is affected during the construction. The playground is proposed to be re-provided at the same location after construction. Slope cut and associated stream diversion and hiking trail diversion is included to form the platform for the Middle Ventilation Buildings.
- Temporary works sites & Barging Points. There will be temporary works sites / areas in the vicinity of the at-grade roads, viaducts, tunnel, ventilation buildings and administration buildings to facilitate the construction process, and these will be within the Works Area Limit. It is recommended that Construction and Demolition (C&D) material should be transported off-site by barge wherever possible to reduce impacts from road transport. Impacts during the operational phase will be permanent and irreversible.

11.7.1.2 Sources of operational phase impact will include the following:

- A general reduction in vegetated coverage.
- The works in Southern Interchange includes slope cut and natural terrain hazard mitigation near the southern portal and along Lung Mun Road.
- The interchange connects both Kong Shan Western Highway and Yuen Long Highway.
- Associated slope works and associated natural terrain hazard mitigation at the northern portal of Tuen Mun Bypass and Route 11.
- three nos. ventilation buildings are required for the operation of the mainline tunnel in Tuen Mun Bypass (refer to Table 11.9 for details). Southern Ventilation Building is proposed to be directly above the southern portal at Pillar Point. Middle Ventilation Building is proposed next to the Wat Fat Playground. Northern Ventilation Building is proposed adjacent to the northern portal at Lam Tei Quarry to minimise the slope cut.
- The administration building located next to the existing Tuen Mun Chek Lap Kok Tunnel Traffic Control Building.
- A satellite control building is proposed next to the northern portal and serves as the backup traffic control centre for Tuen Mun Bypass.

11.7.1.3 However, the implementation of mitigation measures including retaining existing trees, planting of new trees and shrubs and the careful design of the newly formed slopes and retaining walls will be implemented to minimise the potential impacts during the operational phase.

11.7.2 Magnitude of Landscape Impacts

11.7.2.1 In general, unmitigated impact on existing trees are moderately adverse as many of the trees are common species and of moderate amenity value.

11.7.2.2 For the LCAs, the unmitigated impact will be generally adverse due to the loss of existing vegetation and the vacant land after demolition of existing buildings.

11.7.2.3 The magnitude of change for each of the LRs and LCAs listed in the Baseline Study (**Section 11.5**), are provided in **Table 11.8** for LRs and LCAs respectively. During the construction phase, works will be limited to works area. The Table also provide brief descriptions of the considerations taken into account when assessing the magnitude of change, before the implementation of mitigation measures.

11.7.2.4 The significance of landscape impacts, before implementation of mitigation measures, in the construction and operation phases are assessed and presented in **Table 11.13**.

Table 11.8 Magnitude of Change for Landscape Resources and Landscape Character Areas

LR/ LCA	Approx. Area within study area (ha)	Approx. Area affected (m^2)	Physical extent of impact (Nil /Small/ Medium/ Large)	Compatibility with Surrounding Landscape (Good /Fair /Poor)		Duration of Impact (Temporary, Permanent)		Reversibility of Change (Reversible/ Irreversible)		Magnitude of Change (Large/ Intermediate/ Small/ Negligible)	
				Construction	Operation	Construction	Operation	Construction	Operation	Construction	Operation
LR-PP2	26.8	27,500	Large	Poor	Fair	Temporary	Permanent	Irreversible	Irreversible	Intermediate	Intermediate
Plantations in Pillar Point	During construction, this LR will be affected by construction of the roadworks and associated slope works in Lung Mun Road and southern interchange in Pillar Point. Approximate 27,500 sq.m. (10.3% of this LR) will be affected. Approximate 770 nos. of existing trees will be removed by construction of the roadworks and associated slope works in Lung Mun Road and southern interchange in Pillar Point. In addition, one number Trees of Particular interest (TPI), *Ficus elastica* (印度榕), located within GLA-TM 20 (E.M.S.D. Tuen Mun Vehicle Servicing Station) are unavoidably affected by the road works along Lung Mun Road. This *Ficus elastica* tree (with 15m height, 2000mm DBH, 18m spread) is multi-trunk, no well defined main trunk, and moderate asymmetric crown. This tree is considered to have a "low" suitability for transplanting, thus is proposed to be removed accordingly. (refer to **Appendix 11.1** for details). The magnitude of change is rated as **Intermediate**.										
LR-PP4	6.6	19,000	Medium	Poor	Fair	Temporary	Permanent	Irreversible	Irreversible	Intermediate	Intermediate
Shrublands in Pillar Point	During construction, this LR will be affected by construction of the southern interchange in Pillar Point. Approximate 19,000 sq.m. (28.6% of this LR) will be affected. Approximate 40 nos. of existing trees will be removed by construction of the southern interchange in Pillar Point. The magnitude of change is rated as **Intermediate**.										
LR-PP10	2.2	0	Nil	Nil	N/A	N/A	N/A	N/A	N/A	Negligible	Negligible
Seawater Body in Pillar Point	**None**										

LR/ LCA	Approx. Area within study area (ha)	Approx. Area affected (m^2)	Physical extent of impact (Nil /Small/ Medium/ Large)	Compatibility with Surrounding Landscape (Good /Fair /Poor)		Duration of Impact (Temporary, Permanent)		Reversibility of Change (Reversible/ Irreversible)		Magnitude of Change (Large/ Intermediate/ Small/ Negligible)	
				Construction	Operation	Construction	Operation	Construction	Operation	Construction	Operation
LR-PP11	41.4	127,800	Small	Poor	Fair	Temporary	Permanent	Irreversible	Irreversible	Small	Small
Developed Area in Pillar Point	During construction, this LR will be affected by construction of the road works in Lung Mun Road in Pillar Point. Approximate 127,800 sq.m. (30.8% of this LR) will be affected. Approximate 1,136 nos. of existing trees will be removed by construction of the road works in Lung Mun Road in Pillar Point. The magnitude of change is rated as **Small**.										
LR-TM1	2.8	0	Nil	N/A	N/A	N/A	N/A	N/A	N/A	Negligible	Negligible
Secondary Woodland in Tuen Mun	**None**										
LR-TM2	5.9	11,300	Large	Poor	Poor	Temporary	Permanent	Irreversible	Irreversible	Large	Large
Plantations in Tuen Mun	During construction, this LR will be affected by construction of the middle ventilation building and associated slope works in Wah Fat Street. Approximate 11,300 sq.m. (19.1% of this LR) will be affected. Approximate 670 nos. of existing trees will be removed by construction of the middle ventilation building and associated slope works in Wah Fat Street. The magnitude of change is rated as **Large**.										
LR-TM11	11.1	3,700	Nil	Poor	Fair	Temporary	Temporary	Reversible	Reversible	Intermediate	Small
Developed Area in Tuen Mun	Approximate 3,700 sq.m. (3.3% of this LR) will be affected by the temporary works Area 10 and 11. Nil trees will be affected. The magnitude of change is rated as **Intermediate** and **Small** during construction and operation phase.										
LR-TM13	0.5	5,200	Large	Low	Low	Temporary	Permanent	Irreversible	Reversible	Large	Small

LR/ LCA	Approx. Area within study area (ha)	Approx. Area affected (m^2)	Physical extent of impact (Nil /Small/ Medium/ Large)	Compatibility with Surrounding Landscape (Good /Fair /Poor)		Duration of Impact (Temporary, Permanent)		Reversibility of Change (Reversible/ Irreversible)		Magnitude of Change (Large/ Intermediate/ Small/ Negligible)	
				Construction	Operation	Construction	Operation	Construction	Operation	Construction	Operation
Playground in Wah Fat Street	During construction, this LR will be used as works area for ventilation building and tunnel construction. Approximate 5,200 sq.m. (100% of this LR) will be affected. Approximate 37 nos. of existing trees will be removed by works area for ventilation building and tunnel construction. Reinstatement works of Wah Fat Playground, including the ball court, amenity facilities, amenity planting, will be undertaken once the works area for ventilation building and tunnel construction is completed. The magnitude of change is rated as **Large** and **Small** during construction and operation phase.										
LR-LT1	1.3	0	Nil	N/A	N/A	N/A	N/A	N/A	N/A	Negligible	Negligible
Secondary Woodlands in Lam Tei	**None**										
LR-LT2	4.9	10,900	Large	Poor	Poor	Temporary	Permanent	Irreversible	Irreversible	Large	Large
Plantations in Lam Tei	During construction, this LR will be affected by construction of the satellite control building and northern portal area in Lam Tei Quarry. Approximate 10,900 sq.m. (22.1% of this LR) will be affected. Approximate 90 nos. of existing trees will be removed by construction of the satellite control building and northern portal area in Lam Tei Quarry. The magnitude of change is rated as **Large**.										
LR-LT7	160m	0	Nil	N/A	N/A	N/A	N/A	N/A	N/A	Negligible	Negligible
Watercourses in Lam Tei	**None**										
LR-LT11	3	2,200	Small	Poor	Poor	Temporary	Permanent	Irreversible	Irreversible	Small	Small
Developed Area in Lam Tei	During construction, this LR will be affected by construction of the satellite control building and northern portal area in Lam Tei Quarry. Approximate 2,200 sq.m. (7.3% of this LR) will be affected. Approximate 20 nos. of existing trees will be removed by construction of the satellite control building and northern portal area in Lam Tei Quarry. The magnitude of change is rated as **Small**.										
LR-NL2	4.6	22,300	Large	Poor	Fair	Temporary	Temporary	Reversible	Reversible	Large	Small

LR/ LCA	Approx. Area within study area (ha)	Approx. Area affected (m^2)	Physical extent of impact (Nil /Small/ Medium/ Large)	Compatibility with Surrounding Landscape (Good /Fair /Poor)		Duration of Impact (Temporary, Permanent)		Reversibility of Change (Reversible/ Irreversible)		Magnitude of Change (Large/ Intermediate/ Small/ Negligible)	
				Construction	Operation	Construction	Operation	Construction	Operation	Construction	Operation
Plantations in Northern Landfall	During construction, this LR will be affected by construction of the Proposed Temporary Works for the Overhead Conveyor Belts and Slurry Pipes. Approximate 22,300 sq.m. (48.5% of this LR) will be affected. Approximate 20 nos. of existing trees are being affected, and 200 nos. palm trees are recommended to be transplanted. Reinstatement works of the planting area are anticipated once the temporary works are completed. The magnitude of change is rated as **Large** and **Small** during construction and operation phase.										
LR-NL10	20.9	27,800	Large	Poor	Fair	Temporary	N/A	Irreversible	Reversible	Large	Small
Seawater Body at Northern Landfall	During construction, this LR will be affected by construction of the Proposed Temporary Works for the Overhead Conveyor Belts and Slurry Pipes. Approximate 27,800 sq.m. (13.3% of this LR) will be affected. The magnitude of change is rated as **Large** and **Small** during construction and operation phase.										
LR-NL11	19.2	15,600	Small	Poor	Fair	Temporary	Temporary	Reversible	Reversible	Intermediate	Small
Developed Area in Northern Landfall	During construction, this LR will be affected by construction of the Proposed Temporary Works for the Overhead Conveyor Belts and Slurry Pipes. Approximate 15,600 sq.m. (8.1% of this LR) will be affected. 57 nos trees within this LR will be affected and is recommended to be transplanted. Reinstatement works are anticipated once the temporary works are completed. The magnitude of change is rated as **intermediate** and **Small** during construction and operation phase.										
LCA-PP2	31.1	39,400	Large	Poor	Fair	Temporary	Permanent	Irreversible	Irreversible	Intermediate	Intermediate
Pillar Point Upland Fringe Landscape	During construction, this LCA will be affected by construction of the road works in Lung Mun Road and southern ventilation building in Pillar Point. Approximate 39,400 sq.m. (12.7% of this LCA) will be affected. Approximate 770 nos. of existing trees will be removed by construction of the road works in Lung Mun Road and southern ventilation building in Pillar Point. The magnitude of change is rated as **Intermediate**.										

LR/ LCA	Approx. Area within study area (ha)	Approx. Area affected (m^2)	Physical extent of impact (Nil /Small/ Medium/ Large)	Compatibility with Surrounding Landscape (Good /Fair /Poor)		Duration of Impact (Temporary, Permanent)		Reversibility of Change (Reversible/ Irreversible)		Magnitude of Change (Large/ Intermediate/ Small/ Negligible)	
				Construction	Operation	Construction	Operation	Construction	Operation	Construction	Operation
LCA-PP10	22.5	90,400	Large	Fair	Fair	Temporary	Permanent	Irreversible	Irreversible	Intermediate	Intermediate
Lung Mun Road Highway Corridor Landscape	During construction, this LCA will be affected by construction of the road works and associated slope works in Lung Mun Road and southern interchange in Pillar Point. Approximate 90,400 sq.m. (40.2% of this LCA) will be affected. Approximate 946 nos. of existing trees will be removed by construction of the road works and associated slope works in Lung Mun Road and southern interchange in Pillar Point. The magnitude of change is rated as **Intermediate**.										
LCA-PP12	17.6	44,400	Medium	Poor	Fair	Temporary	Permanent	Irreversible	Irreversible	Intermediate	Intermediate
Pillar Point Mixed Modern Institutional Urban Landscape	During construction, this LCA will be affected by construction of the road works and associated slope works in Lung Mun Road. Approximate 44,400 sq.m. (25.2% of this LCA) will be affected. Approximate 230 nos. of existing trees will be removed by construction of the road works and associated slope works in Lung Mun Road. The magnitude of change is rated as **Intermediate**.										
LCA-PP13	5.9	0	Nil	N/A	N/A	N/A	N/A	N/A	N/A	Negligible	Negligible
Pillar Point Mixed Modern Industrial Urban Landscape	**None**										
LCA-TM2	6.3	16,500	Large	Poor	Fair	Temporary	Permanent	Irreversible	Irreversible	Large	Large
Tuen Mun Upland Fringe Landscape	During construction, this LCA will be affected by construction of the middle ventilation building and associated slope works in Wah Fat Street. Approximate 16,500 sq.m. (26.1% of this LCA) will be affected. Approximate 707 nos. of existing trees will be removed by construction of the middle ventilation building and associated slope works in Wah Fat Street. Reinstatement works of Wah Fat Playground, including the ball court, amenity facilities, amenity planting, will be undertaken once the works area for ventilation building and tunnel construction is completed. The magnitude of change is rated as **Large**.										
LCA-TM4	1.4	0	Nil	N/A	N/A	N/A	N/A	N/A	N/A	Negligible	Negligible

LR/ LCA	Approx. Area within study area (ha)	Approx. Area affected (m^2)	Physical extent of impact (Nil /Small/ Medium/ Large)	Compatibility with Surrounding Landscape (Good /Fair /Poor)		Duration of Impact (Temporary, Permanent)		Reversibility of Change (Reversible/ Irreversible)		Magnitude of Change (Large/ Intermediate/ Small/ Negligible)	
				Construction	Operation	Construction	Operation	Construction	Operation	Construction	Operation
Tuen Mun Upland Landscape	**None**										
LCA-TM11	12.6	3,700	Small	Poor	Fair	Temporary	Permanent	Irreversible	Reversible	Small	Small
Tuen Mun Residential Urban Landscape	Approximate 3,700 sq.m. (2.9% of this LCA) will be affected by the temporary works Area 10 and 11. Nil trees will be affected. The magnitude of change is rated as **Intermediate** and **Small** during construction and operation respectively.										
LCA-LT2	1.6	300	Small	Fair	Fair	Temporary	Permanent	Irreversible	Irreversible	Small	Small
Lam Tei Upland Fringe Landscape	During construction, this LCA will be affected by construction of the satellite control building and northern portal area in Lam Tei Quarry. Approximate 300 sq.m. (1.9% of this LCA) will be affected. Approximate 10 nos. of existing trees will be removed by construction of Northern Ventilation Building and surrounding road works in Lam Tei Quarry. The magnitude of change is rated as **Small**.										
LCA-LT3	5.2	8,600	Medium	Poor	Fair	Temporary	Permanent	Irreversible	Irreversible	Intermediate	Intermediate
Lam Tei Rural Landscape	During construction, this LCA will be affected by construction of the satellite control building and northern portal area in Lam Tei Quarry. Approximate 8,600 sq.m. (16.5% of this LCA) will be affected. Approximate 40 nos. of existing trees will be removed by construction of the satellite control building and northern portal area in Lam Tei Quarry. The magnitude of change is rated as **Intermediate**.										
LCA-LT4	2.5	4,200	Large	Poor	Poor	Temporary	Permanent	Irreversible	Irreversible	Large	Large
Lam Tei Upland Landscape	During construction, this LCA will be affected by construction of the satellite control building and northern portal area in Lam Tei Quarry. Approximate 4,200 sq.m. (17% of this LCA) will be affected. Approximate 60 nos. of existing trees will be removed by construction of the satellite control building and northern portal area in Lam Tei Quarry. The magnitude of change is rated as **Large**.										
LCA-NL8	20.9	27,800	Large	Poor	Fair	Temporary	N/A	Irreversible	Reversible	Large	Small

LR/ LCA	Approx. Area within study area (ha)	Approx. Area affected (m^2)	Physical extent of impact (Nil /Small/ Medium/ Large)	Compatibility with Surrounding Landscape (Good /Fair /Poor)		Duration of Impact (Temporary, Permanent)		Reversibility of Change (Reversible/ Irreversible)		Magnitude of Change (Large/ Intermediate/ Small/ Negligible)	
				Construction	Operation	Construction	Operation	Construction	Operation	Construction	Operation
Northern Landfall Maritime landscape	During construction, this LCA will be affected by construction of the Proposed Temporary Works for the Overhead Conveyor Belts and Slurry Pipes. Approximate 27,800 sq.m. (13.3% of this LCA) will be affected. The magnitude of change is rated as **Large** and **Small** during construction and operation phase.										
LCA-NL10	4.6	22,300	Large	Poor	Fair	Temporary	Permanent	Irreversible	Reversible	Large	Small
Northern Landfall Highway Corridor Landscape	During construction, this LCA will be affected by construction of the Proposed Temporary Works for the Overhead Conveyor Belts and Slurry Pipes. Approximate 22,300 sq.m. (48.5% of this LCA) will be affected. Approximate 20 nos. of existing trees are being affected, and 200 nos. palm trees are recommended to be transplanted. Reinstatement works of the planting area are anticipated once the temporary works are completed. The magnitude of change is rated as **Large** and **Small** during construction and operation phase.										
LCA-NL13	19.2	15,600	Small	Poor	Fair	Temporary	Permanent	Irreversible	Reversible	Intermediate	Small
Northern Landfall Mixed Modern Industrial Urban Landscape	During construction, this LCA will be affected by construction of the Proposed Temporary Works for the Overhead Conveyor Belts and Slurry Pipes. Approximate 15,600 sq.m. (8.1% of this LCA) will be affected. 57 nos. trees within this LCA are recommended to be transplanted. Reinstatement works are anticipated once the temporary works are completed. The magnitude of change is rated as **intermediate** and **Small** during construction and operation phase.										

Note : N/A = not applicable

11.8 Visual Impact Assessment

11.8.1 Sources of Visual Impacts

11.8.1.1 The sources of visual impacts in the construction phase would include:

- Site clearance and tree removal/transplanting
- Site formation works
- construction of the tunnel portal areas with major slope works and associated ventilation buildings
- Construction of new lanes, widen existing slip roads, and associated slope works
- Aboveground temporary structures and activities in the works area, Temporary site areas, site offices, haul road, materials, plant, hoarding, construction traffic etc
- Dust and construction debris
- Potential night-time glare arising from the lighting of construction activities

11.8.1.2 The sources of visual impacts in the operation phase would include:

- Operation of Tunnel portal areas with major slope works and associated ventilation buildings
- Operation of tunnel administration area including the tunnel administration building, vehicular bridge, pedestrian footbridge and associated slope works
- Road improvements of new lanes, widen existing slip roads, and associated slope works
- Elevated viaduct along Lung Mun Road
- Increased road traffic and road lighting

11.8.1.3 The locations and development details of permanent aboveground structures that would cause potential visual impact are summarised in **Table 11.9.** For detail information, please refer to Table 2.13 – Key Elements of the Project in Chapter 2.

Table 11.9 Locations and Development Details of Permanent Aboveground Structures

Location	Approximate Height of the Structure (m)	Remark
Lam Tei Quarry (North Portal)	21m	Northern Ventilation Building
	9m	Satellite Control Building
Wah Fat Street in Tuen Mun	19m	Middle Ventilation Building
Tuen Mun West (Southern Portal)	24m	Southern Ventilation Building
	20m	Administration Building
	10m	Maintenance Compound

11.8.1.4 As the construction of tunnels are conducted below ground, it is anticipated that there would not be any potential visual impacts. The magnitude of changes during construction and operation phases is assessed based on the compatibility of the project with the surrounding landscape, scale of development, reversibility of change, approximate viewing distance, degree of visibility as shown in **Table 11.10**.

11.8.1.5 The significance of visual impacts, before the implementation of mitigation measures, in the construction phase and operation phase are assessed in accordance with the methodology set out in **Table 11.1** of the Report and described in **Table 11.14**.

Table 11.10 Magnitude of Change in Views for VSRs

VSR ID	Visually Sensitive Receiver (VSR)	Compatibility of Project with Surroundings (High, Medium, Low, Negligible)	Scale of Development (Large, Medium, Small, Negligible)	Reversibility of Change (Yes, No)	Approximate Viewing Distance (Metres)	Duration of Impacts (Short, Long)		Magnitude of Change (Small, Intermediate, Large)	
						Construction	Operation	Construction	Operation
Southern Interchange in Pillar Point and Middle Ventilation Building									
VSR-TM1	Residents of Alpine Garden, Rainbow Garden, Kam Fai Garden, Harvest Garden and Hoi Tak Garden	Low	Large	No	100m	Short	Long	Large	Intermediate
VSR-TM2	Residents of Seaview Garden	Low	Large	No	600m	Short	Long	Small	Small
VSR-TM3	Residents of Pearl Island Garden	Low	Small	No	2,100m	Short	Long	Small	Small
VSR-TM4	Visitors at Tuen Mun Promenade	Low	Small	No	1,600m	Short	Long	Small	Small
VSR-TM5	Visitors at Hong Kong Gold Coast Dolphin Square	Low	Small	No	1,500m	Short	Long	Small	Small
VSR-TM6	Maritime Travelers to / from Tuen Mun Ferry Terminal	Low	Medium	No	1,500m	Short	Long	Small	Small
VSR-TM7	Vehicle Travelers at Tuen Mun Road	High	Medium	No	200m	Short	Long	Small	Small
VSR-TM8	Recreational Users of Tsing Sin Playground	Low	Large	No	100m	Short	Long	Large	Intermediate
VSR-TM9	Recreational Users of Wah Fat Garden	Low	Large	No	0m	Short	Long	Large	Intermediate
VSR-TM10	Travelers of Wah Fat Street	medium	Large	No	100m	Short	Long	Large	Intermediate

VSR ID	Visually Sensitive Receiver (VSR)	Compatibility of Project with Surroundings (High, Medium, Low, Negligible)	Scale of Development (Large, Medium, Small, Negligible)	Reversibility of Change (Yes, No)	Approximate Viewing Distance (Metres)	Duration of Impacts (Short, Long)		Magnitude of Change (Small, Intermediate, Large)	
						Construction	Operation	Construction	Operation
VSR-TM11	Hikers of MacLehose Trail Section 10	Low	Large	No	50m	Short	Long	Small	Small
VSR-TM12	Visitors of Sam Shing Temple in Castle Peak Road – Castle Peak Bay	Low	Large	No	300m	Short	Long	Small	Small
VSR-PP1	Vehicle Travelers at Lung Mun Road	High	Large	No	100m	Short	Long	Intermediate	Intermediate
VSR-PP2	Workers at EMSD Tuen Mun Vehicle Servicing Station and DSD Pillar Point STW	Medium	Large	No	100m	Short	Long	Small	Small
VSR-PP3	Workers at River Trade Terminal	Medium	Large	No	400m	Short	Long	Small	Small
VSR-PP4	Workers at Tuen Mun Area 40	Low	Large	No	200m	Short	Long	Small	Small
VSR-PP6	Recreational Users of Butterfly Beach Park	Low	Large	No	100m	Short	Long	Intermediate	Intermediate
VSR-NL1	Workers and Travelers at Hong Kong International Airport	Medium	Small	No	7,800m	Short	Long	Small	Small
VSR- NL2	Travelers at Hong Kong Boundary Crossing Facilities	Medium	Small	No	7,000m	Short	Long	Small	Small
VSR- NL3	Workers and Future Residents at MTR Siu Ho Wan Depot	Medium	Small	No	8,400m	Short	Long	Small	Small

VSR ID	Visually Sensitive Receiver (VSR)	Compatibility of Project with Surroundings (High, Medium, Low, Negligible)	Scale of Development (Large, Medium, Small, Negligible)	Reversibility of Change (Yes, No)	Approximate Viewing Distance (Metres)	Duration of Impacts (Short, Long)		Magnitude of Change (Small, Intermediate, Large)	
						Construction	Operation	Construction	Operation
Northern Interchange in Lam Tei Quarry									
VSR-LT1	Residents of Lo Fu Hang and Fu Tei Ha Tsuen	Low	Large	No	120m	Short	Long	Small	Small
VSR-LT2	Vehicle Travellers on Yuen Long Highway (Eastbound)	High	Medium	No	375m	Short	Long	Small	Small
VSR-LT3	Trail Walkers on Fu Tei Country Trail and Lam Tei Irrigation Reservoir	Low	Large	No	70m	Short	Long	Small	Small
VSR-LT4	Visitor of Nam On Fat Tong in Fu Fuk Road	Low	Large	No	200m	Short	Long	Small	Small
VSR-LT5	Recreational users of Fuk Hang Tsuen Basketball Court	Low	Large	No	400m	Short	Long	Small	Small
VSR-LT6	Travelers of Fuk Hang Tsuen Road	Medium	Large	No	300m	Short	Long	Small	Small

11.9 Landscape and Visual Mitigation Measures

11.9.1.1 Mitigation measures are proposed to minimise impacts on the landscape and visual amenity of the area within the visual envelope. These measures include strategies for reducing, offsetting and compensating impacts during construction and operational phases.

Preliminary Recommended Mitigation Measures

11.9.1.2 The assumption has been made in the assessment that all mitigation proposals in this assessment are practical and achievable within the known parameters of funding, implementation, management and maintenance. Although subject to further study, the outline approaches to the mitigation of the predicted impacts are described in **Tables 10.11** and **10.12** and discussed further below.

11.9.1.3 The construction phase mitigation measures described in **Table 11.11** will be adopted from the commencement of construction and will be in place throughout the entire construction period.

Table 11.11 Proposed Visual Enhancement and Landscape Mitigation Measures – Construction Phase

ID No.	Construction Phase Mitigation Measures	Funding Agency	Implementation Agency
CM01	**Tree Protection and Preservation** Trees within the Works Area which are not affected by the works shall be protected and preserved during the detailed design stage and construction phase. The tree preservation proposals shall be coordinated with the layout and design of the engineering and architectural works at the detailed design stage for further retention of individual trees. The preservation of existing tree shall provide instant greening and screening effect for proposed works. Tree protection works to be undertaken in accordance with DEVB TC(W) 4/2020 on "Tree Preservation" and tree risk assessment in accordance with "Guidelines for Tree Risk Assessment and Management Arrangement" by DEVB. The performance of the retained trees shall be monitored throughout the Construction period on a monthly basis by a qualified Arborist. The Contractor shall submit monthly record photo throughout the construction period for all retained trees, to demonstrate the trees' health condition. All monthly record photos for the retained trees shall be prepared by a tree specialist or a qualified arborist, and endorsed by a registered Landscape Architect (RLA).	HyD	HyD (via contractor)

ID No.	Construction Phase Mitigation Measures	Funding Agency	Implementation Agency
CM02	**Tree Transplantation** Should removal of trees be unavoidable due to construction impacts, trees should be transplanted to other permanent locations, if practicable. Detailed transplanting proposal will be submitted to relevant government departments for approval, and shall be in accordance with "Guidelines on Tree Transplanting" by DEVB. Final locations of transplanted trees shall be agreed prior to commencement of the work. The performance of the transplanted trees shall be monitored throughout the construction period by a Qualified Arborist. The monthly record photos shall be prepared by a Qualified Arborist, and are endorsed by a registered Landscape Architect (RLA).	HyD	HyD (via contractor)
CM03	**Works Area and Temporary Works Areas** Construction area control, where possible, to ensure that the landscape and visual impacts arising from the construction activities are minimized, and all affected area will be re-instated accordingly. This includes the reduction of the extent and location of working areas to avoid sensitive LRs, siting of offices or temporary structures so that they are not visually prominent, and consideration of detailed schedules to shorten the construction period. Temporary landscape treatments are considered to be adopted such as applying hydro-seeding on temporary stockpiles and areas of earthworks to alleviate the potential impacts and minimize soil erosion.	HyD	HyD (via contractor)
CM04	**Advance Implementation of Mitigation Planting** Replanting of existing / disturbed vegetation shall be undertaken as soon as technically feasible during the construction phase. The priority shall be areas at the periphery of the site to ensure that proposed planting fulfils its role in mitigating the predicted impacts including screening views of the proposals as early as possible during the operational phase.	HyD	HyD (via contractor)

ID No.	Construction Phase Mitigation Measures	Funding Agency	Implementation Agency
CM05	**Decorative Screen Hoarding** Decorative screen hoarding will be erected along areas of the construction works site boundary where the works site borders publicly accessible routes and/or is close to visually sensitive receivers (VSRs) to screen undesirable views of the works site. It is proposed that the screening be compatible with the surrounding environment and where possible, non-reflective, recessive colours be used.	HyD	HyD (via contractor)
CM06	**Control of night-time lighting** Control of night-time lighting and Construction traffic (land and sea) reduced to practical minimum.	HyD	HyD (via contractor)

11.9.1.4 In addition to measures described in the **Table 11.11**, there are a number of measures such as construction site controls, including the storage of materials, and the location and appearance of site accommodation and site storage, the control of night-time lighting to reduce potential glare and the preservation of existing topsoil for re-use which are considered good site practice. In addition, the construction of the proposed TMB scheme shall be coordinated with the implementation programme for concurrent projects to minimise impacts and where possible reduce the period of disturbance.

11.9.1.5 The operational phase measures are described in **Table 11.12** below and will be adopted during the detailed design, and built as part of the construction works so that they are in place when the TMB Project becomes operational. However, it should be noted that the full effect of the soft landscape mitigation measures will not be realised for several years until the planting matures.

Table 11.12 Proposed Visual Enhancement and Landscape Mitigation Measures – Operational Phase

ID No.	Mitigation Measures	Funding Agency	Implementation Agency
OM01	**Integrated Design Approach** The alignment and structures associated with the new road should be integrated, as far as technically feasible, with existing roadside structures and the landscape context to reduce the potential cumulative impact of the proposed works. ACABAS submission upon completion of conceptual design should be in accordance with ETWB TCW No. 36/2004 – The Advisory Committee on the Appearance of Bridges and Associated Structures (ACABAS). The location and orientation of the associated structures and tunnel ventilation shaft should where possible avoid landscape and visually sensitive areas such woodland, shrubland, and plantation area. The architectural design should seek to reduce the apparent visual mass of the engineering structures through the use of textured finishes and colour blocking. Earth tones are preferred so as to match the existing landscape and visual context. Aesthetic treatment and Design of the building and tunnel ventilation shaft should be vetted and advised upon by ArchSD in accordance with ETWB TCW No. 8/2005 – Aesthetic Design of Ancillary Buildings in Engineering Projects.	HyD	HyD (via contractor)
OM02	**Roadside Planting** Roadside planting shall be provided along the road improvement works as a green buffer to the adjacent VSRs. Greening Provision in the early project planning stage and shall be in accordance with DEVB TCW No. 2/2012- allocation of space for quality greening on Roads. Greening provision in the early project planning stage and shall be in accordance with DEVB TC(W) No. 2/2012 – Allocation of Space for Quality Greening on Roads. Native tree planting on the existing and proposed cut slopes will improve the ecological connectivity between existing woodland habitats with the advantage of creating a more coherent landscape framework. Vertical greening with native self-clinging climbing would be adopted as far as practical.	HyD	HyD (via contractor)

ID No.	Mitigation Measures	Funding Agency	Implementation Agency
OM03	**Compensatory Planting Proposals** In accordance with DEVB TC(W) No. 4/2020, the compensatory planting proposal should have the basic primary objective of planting compensatory trees on-site and off-site in a ratio not less than 1:1 in terms of quantity as far as practicable. With the implementation of the proposed compensatory planting plan, there will be no net loss of trees in terms of quantity as far as practicable. The number of trees to be planted will be confirmed following the completion of the detailed tree survey in Detail Design stage of the project.	HyD	HyD (via contractor)
OM04	**Post-Planting Monitoring** Post-planting monitoring of the compensatory trees shall be undertaken (namely, duration of the post-planting monitoring and monitoring methodology). The monitoring will be aimed to assess the success and performance of the compensatory planting trees, monitor the growth performance of the planted seedlings and whips, and identify any need of vegetation and site maintenance work. All monthly record photos shall be prepared by a tree specialist or a qualified arborist, and endorsed by a registered Landscape Architect (RLA).	HyD	HyD (via contractor)
OM05	**Treatment of Retaining Wall and Slopes** The design and implementation of the aesthetic appearance of the retaining wall and slopes will be undertaken in accordance with GEO Publication No. 1/2011 – Technical Guidelines on Landscape Treatment for Slopes (2011), and WBTC No. 17/2000 on Improvement to the Appearance of Slopes. All aesthetic treatment shall seek the committee's view in accordance with the ETWB TCW No. 36/2004- The Advisory Committee on the Appearance of Bridges and Associated Structures (ACABAS). The engineered structures will be aesthetically enhanced through the use of soft landscape works including tree and shrub planting to give these man- made features a more natural appearance and blending them into the local rural landscape. Light standard sized or whip tree planting will be used on the face of soil cut slopes with a gradient	HyD	HyD (via contractor)

ID No.	Mitigation Measures	Funding Agency	Implementation Agency
	of less than 30 degrees, at the crest and toe of the slope, and within berm planters. These smaller, younger plants will adapt to their new growing conditions more quickly than larger sized stock and establish a naturalistic effect more rapidly. Slopes with a gradient of greater than 30 degrees will be hydroseeded using a mixture of native trees and shrubs. Vertical greening measures shall also be considered on engineering structures. This includes the use of climbing and trailing plants both planted at the crest and toe of the features, and within pockets within the slopes. It is proposed that native species be used to enhance the ecological value of the road corridor and minimize potential maintenance requirements. These measures will be applied to the retaining walls and newly regraded slopes features. Vertical greening with native self-clinging climbing would be adopted as far as practical.		
OM06	**Design of Tunnel Portals** The design of the tunnel portals shall be Sensitive form, height and disposition to minimize impact on perceived bulk and views to visual resources. The "natural terrain" idea will be applied to the design of tunnel portals, and should provide: ▪ Tunnel entry and exit portals and approaches with a minimal physical and visual footprint, retaining or reinstating as much as possible of the surrounding landform and vegetation; ▪ Simple, sculptural portal structures (preferably elliptical, parabolic or circular forms) against a backdrop of vegetation; ▪ Compatible and blend in with existing site context and background. All aesthetic treatment shall seek the committee's view in accordance with the ETWB TCW No. 36/2004- The Advisory Committee on the Appearance of Bridges and Associated Structures (ACABAS). Vertical greening with native self-clinging climbing would be adopted as far as practical.	HyD	HyD (via contractor)
OM07	**Reinstatement of disturbed Landscape Space** Existing open space in Wah Fat Street and planting areas at Northern Landfall will be impacted upon during construction stage. After completion of the construction for the TMB tunnel, the works area will be reinstated and to integrate with the existing	HyD	HyD (via contractor)

ID No.	Mitigation Measures	Funding Agency	Implementation Agency
	Wah Fat Playground located in Wah Fat Street and the planting area in Northern Landfall respectively. All hard and soft landscape areas disturbed temporarily during construction due to temporary excavations, temporary works sites shall be reinstated to equal or better quality, to the satisfaction of the relevant Government Departments.		

11.10 Residual Impact

Significance of Residual Landscape Impacts

11.10.1.1 The assessment assumes that the proposed landscape mitigation measures during the construction and operational phases are described in **Tables 10.11** and **10.12** above are fully implemented.

11.10.1.2 There will be a number of impacts on LRs and LCAs for the TMB alignment during both the construction and operational phases, following the implementation of the proposed mitigation measures. However, these impacts will be confined to areas within the Study Area.

11.10.1.3 Potential impacts on LRs and LCA with mitigation during the construction and operational phases for each road section as described in the sections below. An evaluation of the potential impacts for each road section and the residual landscape impacts for the LRs and LCAs are also presented below and summarised in **Table 11.13**.

Residual Impacts on LRs and LCAs

Southern Interchange in Pillar Point

11.10.1.4 Permanent and irreversible impact is expected to LR-PP2 (Plantations in Pillar Point) due to construction of the roadworks and associated slope works in Lung Mun Road and southern interchange in Pillar Point. Approximately 27,500sq.m. (10.3% of this LR) is expected to be lost. It is estimated that approximate 770 nos. of existing trees are affected, and is recommended to be felled. Proposed new planting is proposed to compensate for the area. This planting will be established after 10 years. It is anticipated that the residual impact significance in Operational Phase will be **Slight** in Day 1 and in Year 10.

11.10.1.5 Permanent and irreversible impact is expected to LR-PP4 (Shrublands in Pillar Point) due to construction of the southern interchange in Pillar Point. Approximately 19,000sq.m. (28.6% of this LR) is expected to be lost. It is estimated that approximate 40 nos. of existing trees are affected and recommended to be felled. Proposed new planting is proposed to compensate for the area. This planting will be established after 10 years. It is anticipated that the residual impact significance in Operational Phase will be **Slight** in Day 1 and in Year 10.

11.10.1.6 It is predicted that there would not be any discernible impact on **LR-PP10** (Seawater Body in Pillar Point) and LCA-PP13 (Pillar Point Mixed Modern Industrial Urban Landscape).

11.10.1.7 Permanent and irreversible impact is expected to LR-PP11 (Developed Area in Pillar Point) due to construction of the road works in Lung Mun Road in Pillar Point. Approximately 127,800sq.m. (30.8% of this LR) is expected to be lost. It is estimated that approximate 1,136 nos. of existing trees are affected, and is recommended to be felled. Proposed new planting is proposed to compensate for the area. This planting will be established after 10 years. It is anticipated that the residual impact significance in Operational Phase will be **Slight** and **Insubstantial** in Day 1 and in Year 10.

11.10.1.8 Permanent and irreversible impact is expected to LCA-PP2 (Pillar Point Upland Fringe Landscape) due to construction of the road works in Lung Mun Road and southern ventilation building in Pillar Point. Approximately 39,400sq.m. (12.7% of this LCA) is expected to be lost. It is estimated that approximate 770 nos. of existing trees are affected, and is recommended to be felled. Proposed new planting is proposed to compensate for the area. This planting will be established after 10 years. It is anticipated that the residual impact significance in Operational Phase will be **Slight** and **Insubstantial** in Day 1 and in Year 10.

11.10.1.9 Permanent and irreversible impact is expected to LCA-PP10 (Lung Mun Road Highway Corridor Landscape) due to construction of the road works and associated slope works in Lung Mun Road and southern interchange in Pillar Point. Approximately 90,400sq.m. (40.2% of this LCA) is expected to be lost. It is estimated that approximate 946 nos. of existing trees are affected, and is recommended to be felled. Proposed new planting is proposed to compensate for the area. This planting will be established after 10 years. It is anticipated that the residual impact significance in Operational Phase will be **Slight** and **Insubstantial** in Day 1 and in Year 10.

11.10.1.10 Permanent and irreversible impact is expected to LCA-PP12 (Pillar Point Mixed Modern Institutional Urban Landscape) due to construction of the road works and associated slope works in Lung Mun Road. Approximately 44,400sq.m. (25.2% of this LCA) is expected to be lost. It is estimated that approximate 230 nos. of existing trees are affected. Proposed new planting is proposed to compensate for the area. This planting will be established after 10 years. It is anticipated that the residual impact significance in Operational Phase will be **Slight** and **Insubstantial** in Day 1 and in Year 10.

Middle Ventilation Building

11.10.1.11 It is predicted that there would not be any discernible impact on LR-TM1 (Secondary Woodland in Tuen Mun).

11.10.1.12 Permanent and irreversible impact is expected to LR-TM2 (Plantations in Tuen Mun) due to construction of the middle ventilation building and associated slope works in Wah Fat Street. Approximately 11,300sq.m. (19.1% of this LR) is expected to be lost. It is estimated that approximate 670 nos. of existing trees are affected, and is recommended to be felled. Proposed new planting is proposed to compensate for the area. This planting will be established after 10 years. It is anticipated that the residual impact significance in Operational Phase will be **Moderate** and **Slight** in Day 1 and in Year 10.

11.10.1.13 Approximately 3,700sq.m. (3.3% of this LR) is expected to be lost. It is predicted that there would not be any discernible impact on LR-TM11 (Developed Area in Tuen Mun).

11.10.1.14 Permanent and reversible impact is expected to LR-TM13 (Playground in Wah Fat Street) due to construction works area for ventilation building and tunnel construction. Approximately 5,200sq.m. (100% of this LR) is expected to be lost during construction stage. It is estimated that approximate 37 nos. of existing trees are affected, and is recommended to be felled. This open space will be re-instated after the construction of ventilation building and tunnel. It is anticipated that the residual impact significance in Operational Phase will be **Slight** and **Insubstantial** in Day 1 and in Year 10.

11.10.1.15 Permanent and irreversible impact is expected to LCA-TM2 (Tuen Mun Upland Fringe Landscape) due to construction of the middle ventilation building and associated slope works in Wah Fat Street. Approximately 16,500sq.m. (26.1% of this LCA) is expected to be lost. It is estimated that approximate 707 nos. of existing trees are affected, and is recommended to be felled. Proposed new planting is proposed to compensate for the area. This planting will be established after 10 years. It is anticipated that the residual impact significance in Operational Phase will be **Moderate** and **Slight** in Day 1 and in Year 10.

11.10.1.16 It is predicted that there would not be any discernible impact on LCA-TM4 (Tuen Mun Upland Landscape).

11.10.1.17 Approximate 3,700sq.m. (2.9% of this LCA) is expected to be lost. Permanent and reversible impact is expected to LCA-TM11 (Tuen Mun Residential Urban Landscape) due to temporary works area. Nil trees will be affected. Proposed new planting is proposed to compensate for the area. It is anticipated that the residual impact significance in Operational Phase will be **Insubstantial** in Day 1 and in Year 10.

Northern interchange in Lam Tei

11.10.1.18 It is predicted that there would not be any discernible impact on LR-LT1 (Secondary Woodlands in Lam Tei).

11.10.1.19 Permanent and irreversible impact is expected to LR-LT2 (Plantations in Lam Tei) due to construction of the satellite control building and northern interchange in Lam Tei Quarry. Approximately 10,900sq.m. (22.1% of this LR) is expected to be lost. It is estimated that approximate 90 nos. of existing trees are affected, and is recommended to be felled. Proposed new planting is proposed to compensate for the area. This planting will be established after 10 years. It is anticipated that the residual impact significance in Operational Phase will be **Moderate** and **Slight** in Day 1 and in Year 10.

11.10.1.20 It is predicted that there would not be any discernible impact on LR-LT7 (Watercourses in Lam Tei).

11.10.1.21 Permanent and irreversible impact is expected to LR-LT11 (Developed Area in Lam Tei) due to construction of the satellite control building and northern interchange in Lam Tei Quarry. Approximately 2,200 sq.m. (7.3% of this LR) is expected to be lost. It is estimated that approximate 20 nos. of existing trees are affected, and is recommended to be felled. Proposed new planting is proposed to compensate for the area. This planting will be established after 10 years. It is anticipated that the residual impact significance in Operational Phase will be **Insubstantial** in Day 1 and in Year 10.

11.10.1.22 Permanent and irreversible impact is expected to LCA-LT2 (Lam Tei Upland Fringe Landscape) due to construction of the satellite control building and northern interchange in Lam Tei Quarry. Approximately 300 sq.m. (1.9% of this LCA) is expected to be lost. It is estimated that approximate 10 nos. of existing trees are affected, and is recommended to be felled. Proposed new planting is proposed to compensate for the area. This planting will be established after 10 years. It is anticipated that the residual impact significance in Operational Phase will be **Insubstantial** in Day 1 and in Year 10.

11.10.1.23 Permanent and irreversible impact is expected to LCA-LT3 (Lam Tei Rural Landscape) due to construction of the satellite control building and northern interchange in Lam Tei Quarry. Approximately 8,600 sq.m. (16.5% of this LCA) is expected to be lost. It is estimated that approximate 40 nos. of existing trees are affected, and is recommended to be felled. Proposed new planting is proposed to compensate for the area. This planting will be established after 10 years. It is anticipated that the residual impact significance in Operational Phase will be **Slight** and **Insubstantial** in Day 1 and in Year 10.

11.10.1.24 Permanent and irreversible impact is expected to LCA-LT4 (Lam Tei Upland Landscape) due to construction of the satellite control building and northern interchange in Lam Tei Quarry. Approximately 4,200 sq.m. (17% of this LCA) is expected to be lost. It is estimated that approximate 60 nos. of existing trees are affected, and is recommended to be felled. Proposed new planting is proposed to compensate for the area. This planting will be established after 10 years. It is anticipated that the residual impact significance in Operational Phase will be **Moderate** and **Slight** in Day 1 and in Year 10.

Northern Landfall in Tuen Mun – Chek Lap Kok Tunnel

11.10.1.25 Permanent and reversible impact is expected to LR-NL2 (plantations in Northern landfall) and LR-NL11 (Developed Area in Northern Landfall) due to construction works area for Proposed Temporary Works for the Overhead Conveyor Belts and Slurry Pipes. Approximately 22,300 sq.m. (48.5% of this LR) and 15,600 sq.m. (8.1% of this LR) are expected to be lost during construction stage. Approximate 20 nos. of existing trees are being affected, in which 200 nos. palm trees are recommended to be transplanted in LR-NL2, while 57 nos. trees will be affected in LR-NL11 (Developed Area in Northern Landfall). Reinstatement works of the planting area are anticipated once the temporary works are completed. It is anticipated that the residual impact significance of LR-NL2 (plantations in Northern landfall) and LR-NL11 (Developed Area in Northern Landfall) in Operational Phase will be **Slight** and **Insubstantial** in Day 1 and in Year 10.

11.10.1.26 Approximately 27,800sq.m., 13.3% of LR-NL10 (Seawater Body at Northern Landfall) is expected to be lost. Nil trees will be affected. It is anticipated that the residual impact significance in Operational Phase will be **Insubstantial** in Day 1 and in Year 10.

11.10.1.27 Approximately 27,800sq.m., 13.3% of this LCA-NL8 (Northern Landfall Maritime Landscape) is expected to be lost. Nil trees will be affected. It is anticipated that the residual impact significance in Operational Phase will be **Insubstantial** in Day 1 and in Year 10.

11.10.1.28 Permanent and reversible impact is expected to LCA- NL10 (Northern Landfall Highway Corridor Landscape) and LCA-NL13 (Northern Landfall Mixed Modern Industrial Urban Landscape) due to construction works area for Proposed Temporary Works for the Overhead Conveyor Belts and Slurry Pipes. Approximately 22,300 sq.m. (48.5% of this

LCA-NL10) and 15,600 sq.m. (8.1% of LCA-NL13) are expected to be lost during construction stage. Approximate 20 nos. of existing trees in LCA-NL10 (Northern Landfall Highway Corridor Landscape) are being affected, in which 200 nos. palm trees are recommended to be transplanted. Reinstatement works of the planting area are anticipated once the temporary works are completed. It is anticipated that the residual impact significance in Operational Phase will be **Slight** and **Insubstantial** in Day 1 and in Year 10 for LCA- NL10 (Northern Landfall Highway Corridor Landscape) and LCA-NL13 (Northern Landfall Mixed Modern Industrial Urban Landscape).

11.10.1.29 The predicted significance of the potential landscape impacts for the LRs and LCAs and the residual landscape impacts, during both the construction and operational phases are summarised in **Table 11.13**.

Broad Brush Tree Survey and Preliminary Recommendation

11.10.1.30 It is estimated that there are approximately 8870 nos. of trees within the 100m landscape assessment area, with an estimated 6208 nos. of existing trees recorded in the tree group survey (including an estimated 6207 nos. of trees in tree groups and 1 no. of individually surveyed Tree of Particular Interest [TPI] within the project boundary, excluding common undesirable species) (refer to **Appendix 11.1** for details). 342 nos. of affected trees, mostly recent plantings associated with TMCLKL, are considered suitable for transplanting; these trees belong to a rich mix of amenity species like *Archontophoenix alexandrae, Plumeria rubra, Roystonea regia, Livistona chinensis, Wodyetia bifurcata, Terminalia catappa, Pongamia pinnata* etc.

11.10.1.31 There is no Registered OVT within the proposed limit of works and the 100m landscape assessment area.

11.10.1.32 However, 1 no. of Tree of Particular Interest (TPI), *Ficus elastica*, within EMSD Tuen Mun Vehicle Servicing Station, would inevitably be affected and proposed to be removed. (refer to **Appendix 11.1** for details).

11.10.1.33 There is 2783 nos. of affected trees (including an estimated 2782 nos. of trees in tree groups and 1 no. of individually surveyed Tree of Particular Interest [TPI], excluding common undesirable species) would be removed due to low "Suitability for Transplanting" at this stage. Trees on hillside areas in Tuen Mun are mostly found as exotic woodland plantation where *Acacia* spp., *Corymbia* spp., *Casuarina equisetifolia, Lophostemon confertus* etc. are common. Native species like *Ficus hispida, Ficus microcarpa, Ficus variegata, Sterculia lanceolata, Schefflera heptaphylla, Aporosa dioica* etc. could be found on more natural parts of the hillside. Since most of the affected individual trees are located either on natural terrain or engineered slopes and in mature size, their survival rate after transplanting is low and not feasible for transplanting. In this connection, tree removal is proposed with compensatory planting.

11.10.1.34 Furthermore, an estimated approximate 380 nos. of common undesirable species (i.e. *Leucaena leucocephala*) are recorded within the tree survey boundary. In accordance with para 25(a) of DEVB TCW No. 4/2020, removal of such trees would not require a TPRP.

11.10.1.35 To achieve a compensatory ratio of not less than 1:1 in terms of number of trees to be removed, at least 2783 nos. of compensatory trees are required. Under the proposed scheme for the Project, opportunities for on-site tree compensation within the Project

boundary has been fully explored and incorporated in the proposed mitigation measures as much as practicable. It is estimated that not less than approximately 2000 nos trees will be planted within the project boundary, namely, approximate 110 nos. compensatory tree planting in heavy standard size is proposed at roadside flat areas mainly near the Northern landfall, Wah Fat Playground, and Tuen Mun Bypass Northern Portal Area, as well as approximate 2000 nos. light standard trees or whip trees will be proposed along at-grade wall planters, subject to the gradient of the proposed new slopes (**Figure 11.10.2 to 11.10.8**). All proposed species shall be commonly used in roadside environment and be native for areas adjoining woodland area where appropriate, so as to enhance the surrounding landscape and ecological value. Reference could be made to Greening Master Plan issued by CEDD and Street Tree Selection Guide promulgated by DEVB.

11.10.1.36 The native seedlings/whip trees for off-site compensatory tree will be tentatively planted at an initial spacing of 1500 mm in staggered pattern on planting area with gradient less than 35 degree. It is anticipated that total area of approximate 1500 sq. m. will be proposed for not less than approximate 700 nos. compensatory whip tree planting (**Figure 11.10.2**).

Table 11.12a Summary tables for the preliminary assessment is provided below:

	COMMON TREE	**TPI**	**TOTAL**
No. of Trees to be Retained	5746	0	5746
No. of Trees to be Transplanted	342	0	342
No. of Trees to be Removed	2782	1	2783
TOTAL No. of Trees:	**8870**	**1**	**8871**

Table 11.13 Significance of Landscape Impacts in Construction and Operational Phases

ID	Landscape Resource / Landscape Character Area	Sensitivity (Low, Medium, High)	Magnitude of Change (Negligible, Small, Intermediate, Large) (Before Mitigation Measures)		Impact Significance before Mitigation (Insubstantial, Slight, Moderate, Substantial)		Recommended Mitigation measures	Residual Impact Significance after Mitigation (Insubstantial, Slight, Moderate, Substantial)		
								Construction	Operation	
			Construction	Operation	Construction	Operation			Day 1	Year 10
Southern Interchange in Pillar Point										
LR-PP2	Plantations in Pillar Point	Medium	Intermediate	Intermediate	Moderate	Moderate	CM1 – CM6 OM1 – OM6	Moderate	Slight	Slight
LR-PP4	Shrublands in Pillar Point	Medium	Intermediate	Intermediate	Moderate	Moderate	CM1 – CM6 OM1 – OM6	Moderate	Slight	Slight
LR-PP10	Seawater Body in Pillar Point	Low	Negligible	Negligible	Insubstantial	Insubstantial	N/A	Insubstantial	Insubstantial	Insubstantial
LR-PP11	Developed Area in Pillar Point	Low	Small	Small	Slight	Slight	CM1 – CM6 OM1 – OM5	Slight	Slight	Insubstantial
LCA-PP2	Pillar Point Upland Fringe Landscape	Medium	Intermediate	Intermediate	Moderate	Moderate	CM1 – CM6 OM1 – OM6	Moderate	Slight	Insubstantial
LCA-PP10	Lung Mun Road Highway Corridor Landscape	Medium	Intermediate	Intermediate	Moderate	Moderate	CM1 – CM6 OM1 – OM5	Moderate	Slight	Insubstantial
LCA-PP12	Pillar Point Mixed Modern Institutional Urban Landscape	Low	Intermediate	Intermediate	Moderate	Moderate	CM1 – CM6 OM1 – OM5	Moderate	Slight	Insubstantial
LCA-PP13	Pillar Point Mixed Modern Industrial Urban Landscape	Low	Negligible	Negligible	Insubstantial	Insubstantial	N/A	Insubstantial	Insubstantial	Insubstantial
Middle Ventilation Building										
LR-TM1	Secondary Woodland in Tuen Mun	High	Negligible	Negligible	Insubstantial	Insubstantial	N/A	Insubstantial	Insubstantial	Insubstantial
LR-TM2	Plantations in Tuen Mun	High	Large	Large	Substantial	Substantial	CM1 – CM6 OM1 – OM5, OM7	Moderate	Moderate	Slight
LR-TM11	Developed Area in Tuen Mun	Medium	Intermediate	Small	Moderate	Moderate	CM1 – CM6 OM1 – OM5, OM7	Slight	Insubstantial	Insubstantial

ID	Landscape Resource / Landscape Character Area	Sensitivity (Low, Medium, High)	Magnitude of Change (Negligible, Small, Intermediate, Large) (Before Mitigation Measures)		Impact Significance before Mitigation (Insubstantial, Slight, Moderate, Substantial)		Recommended Mitigation measures	Residual Impact Significance after Mitigation (Insubstantial, Slight, Moderate, Substantial)		
								Construction	Operation	
			Construction	Operation	Construction	Operation			Day 1	Year 10
LR-TM13	Playground in Wah Fat Street	Medium	Large	Small	Substantial	Moderate	CM1 – CM6 OM1 – OM5, OM7	Moderate	Slight	Insubstantial
LCA-TM2	Tuen Mun Upland Fringe Landscape	High	Large	Large	Substantial	Substantial	CM1 – CM6 OM1 – OM5, OM7	Moderate	Moderate	Slight
LCA-TM4	Tuen Mun Upland Landscape	High	Negligible	Negligible	Insubstantial	Insubstantial	N/A	Insubstantial	Insubstantial	Insubstantial
LCA-TM11	Tuen Mun Residential Urban Landscape	Medium	Small	Small	Moderate	Moderate	CM1 – CM6 OM3 – OM5, OM7	Slight	Insubstantial	Insubstantial
Northern Interchange in Lam Tei Quarry										
LR-LT1	Secondary Woodlands in Lam Tei	High	Negligible	Negligible	Insubstantial	Insubstantial	N/A	Insubstantial	Insubstantial	Insubstantial
LR-LT2	Plantations in Lam Tei	Medium	Large	Large	Moderate	Moderate	CM1 – CM6 OM1 – OM6	Moderate	Moderate	Slight
LR-LT7	Watercourses in Lam Tei	Medium	Negligible	Negligible	Insubstantial	Insubstantial	N/A	Insubstantial	Insubstantial	Insubstantial
LR-LT11	Developed Area in Lam Tei	Low	Small	Small	Slight	Slight	CM1 – CM6 OM1 – OM6	Slight	Insubstantial	Insubstantial
LCA-LT2	Lam Tei Upland Fringe Landscape	Medium	Small	Small	Slight	Slight	CM1 – CM6 OM1 – OM6	Slight	Insubstantial	Insubstantial
LCA-LT3	Lam Tei Rural Landscape	Medium	Intermediate	Intermediate	Moderate	Moderate	CM1 – CM6 OM1 – OM6	Slight	Slight	Insubstantial
LCA-LT4	Lam Tei Upland Landscape	High	Large	Large	Substantial	Substantial	CM1 – CM6 OM1 – OM6	Moderate	Moderate	Slight
Northern Landfall in Tuen Mun – Chek Lap Kok Tunnel										
LR-NL2	Plantations in Northern Landfall	Medium	Large	Small	Moderate	Slight	CM1 – CM6 OM1 – OM5, OM7	Moderate	Slight	Insubstantial

ID	Landscape Resource / Landscape Character Area	Sensitivity (Low, Medium, High)	Magnitude of Change (Negligible, Small, Intermediate, Large) (Before Mitigation Measures)		Impact Significance before Mitigation (Insubstantial, Slight, Moderate, Substantial)		Recommended Mitigation measures	Residual Impact Significance after Mitigation (Insubstantial, Slight, Moderate, Substantial)		
								Construction	Operation	
			Construction	Operation	Construction	Operation			Day 1	Year 10
LR-NL10	Seawater Body at Northern Landfall	Low	Large	Small	Moderate	Slight	CM1 – CM6	Slight	Insubstantial	Insubstantial
LR-NL11	Developed Area in Northern Landfall	Low	Intermediate	Small	Moderate	Slight	CM1 – CM6 OM2 – OM6	Moderate	Slight	Insubstantial
LCA-NL8	Northern Landfall Maritime landscape	Low	Large	Small	Moderate	Slight	CM1 – CM6	Insubstantial	Insubstantial	Insubstantial
LCA-NL10	Northern Landfall Highway Corridor Landscape	medium	Large	Small	Moderate	Slight	CM1 – CM6 OM1 – OM5, OM7	Moderate	Slight	Insubstantial
LCA-NL13	Northern Landfall Mixed Modern Industrial Urban Landscape	Low	Intermediate	Small	Moderate	Slight	CM1 – CM6 OM2 – OM6	Moderate	Slight	Insubstantial

(Note: All impacts are Adverse unless otherwise noted as Beneficial)

Significance of Residual Visual Impacts

11.10.1.37 The proposed visual enhancement and landscape mitigation measures during the construction and operational phases are described in **Tables 11.11** and **Table 11.12** above. The significance of the potential impacts and the residual visual impacts are described below for each road Section and summarised in **Table 11.14**.

11.10.1.38 The photomontage illustrating the potential visual impact during operation with and without mitigation measures from representative VPs due to the Project are shown in **Figure 11.12.1** to **Figure 11.15.4**. The potential visual impacts are assessed and summarised as below:

Viewing Points in Middle Ventilation Building in Tuen Mun and Southern Interchange in Pillar Point

VP-TM1 Residents of Alpine Garden, Hoi Tak Gardens, Harvest Garden, Rainbow Garden and Kam Fai Garden (**Figure 11.12.1**)

11.10.1.39 Viewpoint **VP-TM1** view from Residents of Harvest Garden, which is approximately 100m from the proposed works. This view illustrates the potential landscape and visual impact due to the proposed Middle Ventilation Building at Wah Fat Stret in Tuen Mun. The form and the orientation of the proposed Middle Ventilation Building (approximately 19m) is aesthetically designed to reduce the apparent visual mass and bulkiness of the engineering structures (OM1). Appropriate greenings in the form of native shrub and ground cover planting are proposed on the associated engineering slopes behind the Middle Ventilation Building to enhance the greening effect.

11.10.1.40 With the implementation of proposed mitigation measures such as Integrated Design Approach (OM1) of Aboveground Structures, aesthetic treatment of the retaining wall and slopes (OM5), and re-instatement of affected area (OM7), it is considered that the proposed Middle Ventilation Building and associated slope works would blend in with the surrounding greenery context. During Day 1 and year 10 of the Operation Phase, the residual impact significance after mitigation would be **slight**.

VP-TM2 Residents of Seaview Garden (**Figure 11.12.2**)

11.10.1.41 Viewpoint **VP-TM2** view from Residents of Seaview Garden Block no. 2, at a level of about ~+115 mPD and approximately 600m from the proposed Middle Ventilation Building located in Wah Fat Street in Tuen Mun. This VP is to illustrate the potential landscape and visual impact due to the proposed Middle Ventilation building (approximately 19m height of the building structure) at an elevated view. The proposed middle ventilation building will not impose any change to the visual composition due to the presence of the plantation over the ridge (+80mPD) next to the Tuen Mun Road. Further, the proposed ventilation building will be barely perceptible from this viewing point due to the presence of the dense and tall plantation along the ridgeline.

VP-TM3 Residents of Pearl Island Garden (**Figure 11.12.3**)

11.10.1.42 Viewpoint **VP-TM3** view from Residents of Peral Island Garden, at a level of about 7mPD and approximately 2100m from the proposed South Ventilation Building (approximately 24m height of the building structure) in Pillar Point. This view is to illustrate the potential landscape and visual impact due to the proposed Southern Ventilation Building; road improvement works and re-arrangement of Lung Mun Road area. The rearrangement of Lung Mun Road area is visually coherent with the existing road context from this distant viewpoint, hence the unmitigated visual impact is slight. Mitigation measures such as Preservation of Existing Vegetation (CM01), Control of Night-time Lighting Glare (CM06), Compensatory Tree Planting for Loss of Existing Trees (OM03) and Integrated Design Approach (OM01) can be provided for further ameliorating the view. During Day 1 and year 10 of the Operation Phase, the residual impact significance after mitigation would be **Insubstantial**.

VP-TM4 Visitors at Tuen Mun Promenade (**Figure 11.12.4**)

11.10.1.43 Viewpoint **VP-TM4** view from visitors at Tuen Mun Promenade and is about 1600m from the Middle Ventilation Building in Tuen Mun. This view is to illustrate the potential landscape and visual impact due to the proposed Middle Ventilation Building (approximately 19m height of the building structure) at Wah Fat Street in Tuen Mun. The proposed middle ventilation building will not impose any change to the visual composition, because of the building blocks, namely, Palm Cove (approximate +65mPD) in Tsing Ha Lane, which screen off the view. The proposed ventilation building will be barely perceptible from this viewing point. Mitigation measures such as Preservation of Existing Vegetation (CM01), Control of Night-time Lighting Glare (CM06), Compensatory Tree Planting for Loss of Existing Trees (OM03) and Integrated Design Approach (OM01) can be provided for further ameliorating the view. During Day 1 and year 10 of the Operation Phase, the residual impact significance after mitigation would be **Insubstantial**.

VP-TM5 Visitors at Hong Kong Gold Coast Dolphin Square (**Figure 11.12.5**)

11.10.1.44 Viewpoint **VP-TM5** view from recreational visitors at Hong Kong Gold Coast Dolphin Square in Gold Coast, Tuen Mun. This view is to illustrate the potential landscape and visual impact due to the proposed Middle Ventilation Building (approximately 19m height of the building structure) at Wah Fat Street in Tuen Mun. The proposed middle ventilation building will not impose any change to the visual composition, because of the building blocks, namely, Seaview Garden (~+115mPD) and Tsing Yung Terrace (+140mPD), which obscure the view. The proposed Southern ventilation building (approximately 24m height of the building structure) and Administration Building (approximately 20m height of the building structure) will be barely perceptible from this viewing point. Mitigation measures such as Preservation of Existing Vegetation (CM01), Control of Night-time Lighting Glare (CM06), Compensatory Tree Planting for Loss of Existing Trees (OM03) and Integrated Design Approach (OM01) can be provided for further ameliorating the view. During Day 1 and year 10 of the Operation Phase, the residual impact significance after mitigation would be **Insubstantial**.

VP-TM6 Maritime Travelers to / from Tuen Mun Ferry Terminal (**Figure 11.12.6**)

11.10.1.45 Viewpoint **VP-TM6** view from sea travellers to or from Tuen Mun Ferry Terminal in Tuen Mun, which is approximate 1500m from the Southern Interchange in Pillar Point. This view is to illustrate the potential landscape and visual impact due to the proposed Southern Ventilation Building (approximately 24m height of the building) and Administration Building (approximately 20m height of the building structure) in Pillar Point. The proposed works will not be noticeable to the sea travellers due to its kinetic nature and distant view. Mitigation measures such as Preservation of Existing Vegetation (CM01), Control of Night-time Lighting Glare (CM06), Compensatory Tree Planting for Loss of Existing Trees (OM03) and Integrated Design Approach (OM01) can be provided for further ameliorating the view. During Day 1 and year 10 of the Operation Phase, the residual impact significance after mitigation would be **Insubstantial**.

VP-TM7 Vehicle Travelers at Tuen Mun Road **(Figure 11.12.7**)

11.10.1.46 Viewpoint **VP-TM7** view from vehicle traveller along Tuen Mun Road, which is approximate 200m from the Middle Ventilation Building in Wah Fat Street. This view is to illustrate the potential landscape and visual impact due to the proposed Middle Ventilation Building (approximately 19m height of the building structure) at Wah Fat Street in Tuen Mun. The proposed middle ventilation building will not impose any change to the visual composition, because the building blocks, namely, Kam Fai Garden (approximate +62mPD), Harvest Garden (approximate +64mPD) in Wah Fat Street will obstruct the view. The proposed ventilation building will be barely perceptible from this viewing point due to the kinetic nature of **VP-TM7.** Mitigation measures such as Preservation of Existing Vegetation (CM01), Control of Night-time Lighting Glare (CM06), Compensatory Tree Planting for Loss of Existing Trees (OM03) and Integrated Design Approach (OM01) can be provided for further ameliorating the view. During Day 1 and year 10 of the Operation Phase, the residual impact significance after mitigation would be **Insubstantial**.

VP-TM11 Hikers of MacLehose Trail Section 10 (**Figure 11.12.8**)

11.10.1.47 Viewpoint **VP-**TM11 view from Hikers of MacLehose Trail Section 10, which less than 50 m from the proposed middle ventilation building (approximately 19m height of the building structure) in Wah Fat Street in Tuen Mun. This view is to illustrate the potential landscape and visual impact due to the proposed Middle Ventilation Building approximately 19m height of the building structure) located in Wah Fat Street in Tuen Mun. The alignment of proposed ventilation building are carefully designed to minimize the works extent and temporary works area (CM03). The form and layout of proposed middle Ventilation and portal structure are aesthetically designed (OM1) to reduce the bulkiness. Appropriate greenings (OM05) in the form of native shrub and groundcover planting are proposed on the associated slopes in the portal area to maximize the screening effect. The proposed ventilation building will be barely perceptible from this viewing point (**VP-TM7)** due to the existing vegetation along the Hiking trail of of MacLehose Trail Section 10. During Day 1 and year 10 of the Operation Phase, the residual impact significance after mitigation would be **slight** and **Insubstantial**.

VP-TM12 Visitors of Sam Shing Temple in Castle Peak Road – Castle Peak Bay (**Figure 11.12.9**)

11.10.1.48 Viewpoint **VP-TM12** view from Visitors of Sam Shing Temple in Castle Peak Road – Castle Peak Bay, which less than 300 from the proposed middle ventilation building (approximately 19m height of the building structure) in Wah Fat Street in Tuen Mun. This view is to illustrate the potential landscape and visual impact due to the proposed Middle Ventilation Building (approximately 19m height of the building structure) located in Wah Fat Street in Tuen Mun. The alignment of proposed ventilation building are carefully designed to minimize the works extent and temporary works area (CM03). The form and layout of proposed middle Ventilation and portal structure are aesthetically designed (OM1) to reduce the bulkiness. Appropriate greenings (OM05) in the form of native shrub and groundcover planting are proposed on the associated slopes in the portal area to maximize the screening effect. The proposed ventilation building will be barely perceptible from this viewing point (**VP-TM12)** due to the existing vegetation along both side of Tuen Mun Road. During Day 1 and year 10 of the Operation Phase, the residual impact significance after mitigation would be both **Insubstantial**.

VP-PP1 Vehicle Travelers at Lung Mun Road (**Figure 11.13.1**)

11.10.1.49 Viewpoint **VP-PP1** view from vehicle traveller along Lung Mun Road in Pillar Point, which less than 100 m from the Southern Interchange in Pillar Point. This view is to illustrate the potential landscape and visual impact due to the proposed Southern Interchange in Pillar Point, and the associated Southern Ventilation Building (approximately 24m height of the building structure) and Administration Building (approximately 20m height of the building structure) in Pillar Point. The alignment of proposed interchange and associated buildings are carefully designed to minimize the works extent and temporary works area (CM03). The form and layout of proposed Southern Ventilation Building (approximately 24m height of the building structure), Administration Building (approximately 20m height of the building structure) and portal structure are aesthetically designed (OM1) to reduce the bulkiness. Appropriate greenings (OM05) in the form of native shrub and groundcover planting are proposed on the associated slopes in the portal area to maximize the screening effect.

11.10.1.50 With the implementation of proposed mitigation measures such as aesthetically pleasing design of the Aboveground Structures (OM01) and Tunnel Portals (OM06), as well as aesthetic treatment of retaining wall and slopes (OM05), it is considered that the proposed southern Interchange in Pillar Point and associated slope works will be blend in with the surrounding context. During Day 1 and year 10 of the Operation Phase, the residual impact significance after mitigation would be both **slight.**

VP-PP2 Workers at EMSD Tuen Mun Vehicle Servicing Station and DSD Pillar Point STW (**Figure 11.13.2**)

11.10.1.51 Viewpoint **VP-PP2** view from workers at EMSD Tuen Mun Vehicular Servicing Station which is approximate 100m from the proposed roadworks of Tuen Mun Bypass in Lung Mun Road. This view is to illustrate the potential landscape and visual impact due to the proposed bridge in the vicinity of Mong Tat Street Junction. The existing visual composition is largely composed by roadside plantation in the foreground and middle-ground, and with sky view as the background. The proposed bridge in Lung Mun Road will not constitute a noticeable change to the visual composition due to the presence of buffer roadside plantation in Lung Mun Road and Mong Tat Street. Mitigation measures such as Preservation of Existing Vegetation (CM01), Control of Night-time Lighting Glare (CM06), Compensatory Tree Planting for Loss of Existing Trees (OM03) and Integrated Design Approach (OM01) can be provided for further ameliorating the view. During Day 1 and year 10 of the Operation Phase, the residual impact significance after mitigation would be both **Insubstantial**.

VP-PP3 Workers at River Trade Terminal (**Figure 11.13.3**)

11.10.1.52 Viewpoint **VP-PP3** view from workers at River Trade Terminal in Pillar Point, which is approximate 400m from the proposed roadworks of Tuen Mun Bypass in Lung Mun Road. This view is to illustrate the potential landscape and visual impact due to the proposed bridge in the vicinity of Mong Tat Street Junction. The existing visual composition is largely composed by machinery and container in the foreground, ridgeline of Siu Lang Shui as middle-ground, and with sky view as the background. The proposed bridge in Lung Mun Road will not constitute a noticeable change to the visual composition as the views will be obstructed by the containers within the River Trade Terminal. Mitigation measures such as Preservation of Existing Vegetation (CM01), Control of Night-time Lighting Glare (CM06), Compensatory Tree Planting for Loss of Existing Trees (OM03) and Integrated Design Approach (OM01) can be provided for further ameliorating the view. During Day 1 and year 10 of the Operation Phase, the residual impact significance after mitigation would be both **Insubstantial**.

VP-PP4 Workers at Tuen Mun Area 40 (**Figure 11.13.4**)

11.10.1.53 Viewpoint **VP-PP4** view from workers at Tuen Mun Area 40, which is approximate 200m from the proposed roadworks of Tuen Mun Bypass in Lung Mun Road. This view is to illustrate the potential landscape and visual impact due to the proposed southern Interchange in the vicinity of Lung Mun Road. The existing visual composition is largely composed by the industrial machinery in the foreground and middle-ground, and with sky view as the background. The proposed road works in Lung Mun Road will not constitute a noticeable change to the visual composition as the views will be obstructed by the industrial machinery. Mitigation measures such as Preservation of Existing Vegetation (CM01), Control of Night-time Lighting Glare (CM06), Compensatory Tree Planting for Loss of Existing Trees (OM03) and Integrated Design Approach (OM01) can be provided for further ameliorating the view. During Day 1 and year 10 of the Operation Phase, the residual impact significance after mitigation would be **Insubstantial**.

Viewing Points at North Lantau (NL)

VP-NL2 Travelers at Hong Kong Boundary Crossing Facilities (**Figure 11.14.1)**

11.10.1.54 Viewpoint **VP-NL2** view from traveller in Hong Kong Boundary Crossing Facilities in Lantau Island, which is over 7000m from the Southern Interchange in Pillar Point. This view is to illustrate the potential landscape and visual impact due to the proposed Southern Interchange and associated buildings in the vicinity of Lung Fu Road Junction in Pillar Point. The proposed Southern Interchange in Pillar Point will not impose any change to the visual composition because of the distance view and kinetic nature. Mitigation measures such as Preservation of Existing Vegetation (CM01), Control of Night-time Lighting Glare (CM06), Compensatory Tree Planting for Loss of Existing Trees (OM03) and Integrated Design Approach (OM01) can be provided for further ameliorating the view. During Day 1 and year 10 of the Operation Phase, the residual impact significance after mitigation would be **Insubstantial**.

Northern Interchange in Lam Tei Quarry

VSR-LT1 – Residents of Lo Fu Hang (**Figure 11.15.1**)

11.10.1.55 Viewpoint **VP-LT1** view from residents in Lo Fu Hang, which is approximately 120m from the Northern Interchange in Lam Tei Quarry. This view is to illustrate the potential landscape and visual impact due to the proposed Northern Interchange in Lam Tei Quarry and the associated Northern Ventilation Building (approximately 21m height of the building structure). The proposed Northern Ventilation Building will not impose any change to the visual composition because of the presence of plantation in Fu Fuk Road. Mitigation measures such as Preservation of Existing Vegetation (CM01), Control of Night-time Lighting Glare (CM06), Compensatory Tree Planting for Loss of Existing Trees (OM03) and Integrated Design Approach (OM01) can be provided for further ameliorating the view. During Day 1 and year 10 of the Operation Phase, the residual impact significance after mitigation would be **Slight** and **Insubstantial**.

VSR-LT2 – Vehicle Travellers on Yuen Long Highway (Eastbound)

(Figure 11.15.2)

11.10.1.56 Viewpoint **VP-LT2** view from vehicle traveller along Yuen Long Highway, which is approximate 375m from the Northern Ventilation Building in Lam Tei Quarry. This view is to illustrate the potential landscape and visual impact due to the proposed Northern Interchange in Lam Tei Quarry (approximately 21m height of the building structure) in Lam Tei Quarry. The proposed Northern Ventilation building will not impose any change to the visual composition, because the noise barrier will obstruct the view. The proposed ventilation building will be barely perceptible from this viewing point due to the kinetic nature of **VP-LT2.** Mitigation measures such as Preservation of Existing Vegetation (CM01), Control of Night-time Lighting Glare (CM06), Compensatory Tree Planting for Loss of Existing Trees (OM03) and Integrated Design Approach (OM01) can be provided for further ameliorating the view. During Day 1 and year 10 of the Operation Phase, the residual impact significance after mitigation would be both **Insubstantial**.

VSR-LT3 – Trail Walkers on Fu Tei Country Trail and Lam Tei Irrigation Reservoir (**Figure 11.15.3**)

11.10.1.57 Viewpoint **VP-LT3** view from trail walkers crossing the Lam Tei Reservoir dam, , which is approximate 75m from the Northern Ventilation Building in Lam Tei Quarry. This view is to illustrate the potential landscape and visual impact due to the proposed Northern Interchange in Lam Tei Quarry (approximately 21m height of the building structure) in Lam Tei Quarry. The proposed Northern Ventilation building will not impose any change to the visual composition, because the ridgeline will obstruct the view. The proposed ventilation building will be barely perceptible from this viewing point due to the kinetic nature o**f VP-LT3.** Mitigation measures such as Preservation of Existing Vegetation (CM01), Control of Night-time Lighting Glare (CM06), Compensatory Tree Planting for Loss of Existing Trees (OM03) and Integrated Design Approach (OM01) can be provided for further ameliorating the view. During Day 1 and year 10 of the Operation Phase, the residual impact significance after mitigation would be both **Insubstantial**.

VSR-LT5 – Recreational users of Fuk Hang Tsuen Basketball Court (**Figure 11.15.4**)

11.10.1.58 Viewpoint **VP-LT5** view from Recreational users of Fuk Hang Tsuen Basketball Court, which is approximate 400m from the Lam Tei Quarry (North Portal) in Lam Tei Quarry. This view is to illustrate the potential landscape and visual impact due to the proposed Northern Interchange in Lam Tei Quarry (approximately 21m height of the building structure) in Lam Tei Quarry. The proposed Northern Ventilation building will not impose any change to the visual composition, because the vegetation will obstruct the view. The proposed ventilation building will be barely perceptible from this viewing point due to the existing vegetation located around the basketball court. Mitigation measures such as Preservation of Existing Vegetation (CM01), Control of Night-time Lighting Glare (CM06), Compensatory Tree Planting for Loss of Existing Trees (OM03) and Integrated Design Approach (OM01) can be provided for further ameliorating the view. During Day 1 and year 10 of the Operation Phase, the residual impact significance after mitigation would be **slight** and both **Insubstantial**.

Table 11.14 Significance of Visual Impacts in Construction and Operational Phases

VSR ID	Visually SensitiveReceiver (VSR)	Receptor Sensitivity (Low, Medium,High)		Magnitude of Change before Mitigation (Negligible, Small, Intermediate, Large)		Impact Significance before Mitigation (Insubstantial, Slight, Moderate, Substantial)		Recommended mitigation measures	Residual Impact Significance after Mitigation (Insubstantial, Slight, Moderate, Substantial)		
		Construction	Operation	Construction	Operation	Construction	Operation		Construction	Operation	
										Day 1	Year 10
Southern Interchange in Pillar Point											
VSR-TM1	Residents of Alpine Garden, Rainbow Garden, Kam Fai Garden, Harvest Garden and Hoi Tak Garden	Medium	Medium	Large	Intermediate	Substantial	Moderate	CM1 – CM6 OM1 – OM7	Moderate	Slight	Slight
VSR-TM2	Residents of Seaview Garden	Medium	Medium	Small	Small	Slight	Slight	CM1 – CM6 OM1 – OM6	Insubstantial	Insubstantial	Insubstantial
VSR-TM3	Residents of Pearl Island Garden	Medium	Medium	Small	Small	Slight	Slight	CM1 – CM6 OM1 – OM6	Slight	Insubstantial	Insubstantial
VSR-TM4	Visitors at Tuen Mun Promenade	High	High	Small	Small	Slight	Slight	CM1 – CM6 OM1 – OM6	Slight	Insubstantial	Insubstantial
VSR-TM5	Visitors at Hong Kong Gold Coast Dolphin Square	High	High	Small	Small	Slight	Slight	CM1 – CM6 OM1 – OM6	Slight	Insubstantial	Insubstantial
VSR-TM6	Maritime Travelers to / from Tuen Mun Ferry Terminal	Medium	Medium	Small	Small	Slight	Slight	CM1 – CM6 OM1 – OM6	Slight	Insubstantial	Insubstantial
VSR-TM7	Vehicle Travelers at Tuen Mun Road	Low	Low	Small	Small	Slight	Slight	CM1 – CM6 OM1 – OM7	Slight	Insubstantial	Insubstantial
VSR-TM8	Recreational Users of Tsing Sin Playground	Medium	Medium	Large	Intermediate	Moderate	Moderate	CM1 – CM6 OM1 – OM7	Slight	Slight	Insubstantial
VSR-TM9	Recreational Users of Wah Fat Garden	Medium	Medium	Large	Intermediate	Substantial	Moderate	CM1 – CM6 OM1 – OM7	Moderate	Slight	Slight
VSR-TM10	Travelers of Wah Fat Street	Low	Low	Large	Intermediate	Moderate	Slight	CM1 – CM6 OM1 – OM7	Slight	Slight	Slight
VSR-TM11	Hikers of MacLehose Trail Section 10	High	High	Small	Small	Moderate	Moderate	CM1 – CM6 OM1 – OM7	Moderate	Slight	Insubstantial
VSR-TM12	Visitors of Sam Shing Temple in Castle Peak Road – Castle Peak Bay	Medium	Medium	Small	Small	Moderate	Moderate	CM1 – CM6 OM1 – OM6	Slight	Insubstantial	Insubstantial
VSR-PP1	Vehicle Travelers at Lung Mun Road	Low	Low	Intermediate	Intermediate	Moderate	Moderate	CM1 – CM6 OM1 – OM6	Moderate	Slight	Slight

VSR ID	Visually SensitiveReceiver (VSR)	Receptor Sensitivity (Low, Medium,High)		Magnitude of Change before Mitigation (Negligible, Small, Intermediate, Large)		Impact Significance before Mitigation (Insubstantial, Slight, Moderate, Substantial)		Recommended mitigation measures	Residual Impact Significance after Mitigation (Insubstantial, Slight, Moderate, Substantial)		
		Construction	Operation	Construction	Operation	Construction	Operation		Construction	Operation	
										Day 1	Year 10
VSR-PP2	Workers at EMSD Tuen Mun Vehicle Servicing Station and DSD Pillar Point STW	Medium	Medium	Small	Small	Slight	Slight	CM1 – CM6 OM1 – OM6	Slight	Insubstantial	Insubstantial
VSR-PP3	Workers at River Trade Terminal	Medium	Medium	Small	Small	Slight	Slight	CM1 – CM6 OM1 – OM6	Slight	Insubstantial	Insubstantial
VSR-PP4	Workers at Tuen Mun Area 40	Medium	Medium	Small	Small	Slight	Slight	CM1 – CM6 OM1 – OM6	Slight	Insubstantial	Insubstantial
VSR-PP6	Recreational Users of Butterfly Beach Park	High	High	Intermediate	Intermediate	Moderate	Moderate	CM1 – CM6 OM1 – OM6	Moderate	Slight	Insubstantial
VSR-NL1	Workers and Travelers at Hong Kong International Airport	Medium	Medium	Small	Small	Slight	Slight	CM1 – CM6 OM1 – OM6	Slight	Insubstantial	Insubstantial
VSR- NL2	Travelers at Hong Kong Boundary Crossing Facilities	Low	Low	Small	Small	Slight	Slight	CM1 – CM6 OM1 – OM6	Slight	Insubstantial	Insubstantial
VSR- NL3	Workers and Future Residents at MTR Siu Ho Wan Depot	Medium	Medium	Small	Small	Slight	Slight	CM1 – CM6 OM1 – OM6	Slight	Insubstantial	Insubstantial
Northern Interchange in Lam Tei Quarry											
VSR-LT1	Residents of Lo Fu Hang	High	High	small	Small	Moderate	Moderate	CM1 – CM6 OM1 – OM6	Moderate	Slight	Insubstantial
VSR-LT2	Vehicle Travellers on Yuen Long Highway (Eastbound)	Low	Low	small	Small	Insubstantial	Insubstantial	CM1 – CM6 OM1 – OM6	Insubstantial	Insubstantial	Insubstantial
VSR-LT3	Trail Walkers on Fu Tei Country Trail and Lam Tei Irrigation Reservoir	High	High	small	Small	Insubstantial	Insubstantial	CM1 – CM6 OM1 – OM6	Insubstantial	Insubstantial	Insubstantial
VSR-LT4	Visitor of Nam On Fat Tong in Fu Fuk Road	Medium	Medium	small	Small	Moderate	Moderate	CM1 – CM6	Moderate	Slight	Insubstantial
VSR-LT5	Recreational users of Fuk Hang Tsuen Basketball Court	Medium	Medium	small	Small	Moderate	Moderate	OM1 – OM6	Moderate	Slight	Insubstantial
VSR-LT6	Travelers of Fuk Hang Tsuen Road	Low	Low	small	Small	Slight	Slight	CM1 – CM6 OM1 – OM6	Slight	Slight	Insubstantial

11.11 Cumulative Impact

11.11.1.1 There are potential for cumulative landscape and visual impacts from other committed or planned projects within the landscape assessment Study Area and the identified VE that will be concurrent with the Route 11 Project. According to Chapter 2, it is noted that cumulative impacts from committed projects that will be completed before the commencement of the construction of the Route 11 Project form part of the landscape and visual baseline, and are not included in any cumulative assessment.

11.11.1.2 At this stage, it is not possible to confirm with certainty on other projects that may be implemented concurrently and give rise to cumulative impacts. However, according to Table 2.15 – Summary of Potential Concurrent Projects, there are several future projects that will be located in the Study Area for the Route 11 project as follows:

- R11, connection of the NWNT to the Urban area and Lantau island.
- Sunny Bay Reclamation, close proximity to the southern reclamation of the Tsing Lung Tau Bridge at North Lantau ;
- Road P1 (Tai Ho – Sunny Bay Section), which is relevant to Route 8 at North Lantau;
- Tsing Yi - Lantau Link, which is relevant to Route 8 at North Lantau; and
- Hong Kong Island West - Northeast Lantau Link under the Lantau Tomorrow Vision, which is relevant to Route 8 at North Lantau.
- Widening of Yuen Long Highway (Section between Lam Tei Quarry and Tong Yan San Tsuen Interchange), close proximity to the Lam Tei Quarry.
- Cycle Track between Tsuen Wan and Tuen Mun

11.12 Summary and Conclusions

Summary of Landscape and Visual Impacts during construction phase

11.12.1.1 The project will inevitable The Project will inevitably result in some landscape and visual impacts during construction and operation phases. These impacts have been minimized through careful consideration of alternatives to minimize direct conflict with the Tai Lam Country Park, minimization of works areas, and incorporation of aesthetic external designs and appropriate landscape and visual treatments along the TMB.

11.12.1.2 Among the estimated 6208 nos. of existing trees (excluding common undesirable species) within the tree survey boundary, 3083 nos. of existing trees would not be affected and will be retained and protected. 342 nos. of affected trees, mostly recent plantings associated with TMCLKL, are considered suitable for transplanting. 2783 nos. of affected trees would be removed due to low "Suitability for Transplanting" at this stage. Since most of the affected individual trees are located either on natural terrain or engineered slopes and in mature size, their survival rate after transplanting is low and not feasible for transplanting. In this connection, tree removal is proposed with compensatory planting.

11.12.1.3 There is no Registered OVT within the proposed limit of works. 1 no. of Tree of Particular Interest (TPI), *Ficus elastica* with DBH of over 1m, within EMSD Tuen Mun Vehicle Servicing Station, would inevitably be affected and proposed to be removed. (refer to **Appendix 11.1** for details).

11.12.1.4 During the construction phase, there will be **Moderate** adverse residual impacts after mitigation for LR-PP2 (Plantations in Pillar Point), LR- PP4 (Shrublands in Pillar Point), LR-TM2 (Plantations in Tuen Mun), LR-TM13 (Playground in Wah Fat Street), LR-LT2 (Plantations in Lam Tei), LCA-PP2 (Pillar Point Upland Fringe Landscape), LCA-PP10 (Lung Mun Road Highway Corridor Landscape), LCA-PP12 (Pillar Point Mixed Modern Institutional Urban Landscape), LCA-TM2 (Tuen Mun Upland Fringe Landscape), LCA-LT4 (Lam Tei Upland Landscape), LR-NL2 (Plantations in Northern Landfall), LR-NL11(Developed Area in Northern Landfall), LCA-NL10 (Northern Landfall Highway Corridor Landscape) and LCA-NL13 (Northern Landfall Mixed Modern Industrial Urban Landscape).

11.12.1.5 During the construction phase, there will be **Slight** adverse residual impacts after mitigation for LR-PP11 (Developed Area in Pillar Point), LR-TM11 (Developed Area in Tuen Mun), LR-LT11 (Developed Area in Lam Tei), LR-NL10 (Seawater Body at Northern Landfall), LCA-TM11 (Tuen Mun Residential Urban Landscape), LCA-LT2 (Lam Tei Upland Fringe Landscape) and LCA-LT3 (Lam Tei Rural Landscape).

11.12.1.6 The remaining LR and LCA will be subject to an **Insubstantial** residual impact, namely, LR-PP10 (Seawater Body in Pillar Point), LR-TM1 (Secondary Woodland in Tuen Mun), LCA-TM4 (Tuen Mun Upland Landscape), LR-LT1 (Secondary Woodlands in Lam Tei), LR-LT7 (Watercourses in Lam Tei), LCA-NL8 (Northern Landfall Maritime landscape) and LCA-PP13 (Pillar Point Mixed Modern Industrial Urban Landscape).

11.12.1.7 During construction stage, there will be **Moderate** adverse residual visual impacts after mitigation for VSR-TM1 (Residents of Alpine Garden, Rainbow Garden, Kam Fai Garden, Harvest Garden and Hoi Tak Garden), VSR-PP1 (Vehicle Travelers at Lung Mun Road), VSR-TM9 (Recreational Users of Wah Fat Garden), VSR-TM11 (Hikers of MacLehose Trail Section 10), VSR-PP6 (Recreational Users of Butterfly Beach Park), VSR-LT1 (Residents of Lo Fu Hang), VSR-LT4 (Visitor of Nam On Fat Tong in Fu Fuk Road), and VSR-LT5 (Recreational users of Fuk Hang Tsuen Basketball Court).

11.12.1.8 During construction stage, there will be **Slight** adverse residual visual impacts after mitigation for VSR-TM3 (Residents of Pearl Island Garden), VSR-TM4 (Visitors at Tuen Mun Promenade), VSR-TM5 (Visitors at Hong Kong Gold Coast Dolphin Square), VSR-TM6 (Maritime Travelers to / from Tuen Mun Ferry Terminal), VSR-TM7 (Vehicle Travelers at Tuen Mun Road), VSR-TM8 (Recreational Users of Tsing Sin Playground), VSR-TM10 (Travelers of Wah Fat Street), VSR-TM12 (Visitors of Sam Shing Temple in Castle Peak Road – Castle Peak Bay), VSR-PP2 (Workers at EMSD Tuen Mun Vehicle Servicing Station and DSD Pillar Point STW), VSR-PP3 (Workers at River Trade Terminal), VSR-PP4 (Workers at Tuen Mun Area 40), VSR-NL1 (Workers and Travelers at Hong Kong International Airport), VSR-NL2 (Travelers at Hong Kong Boundary Crossing Facilities), VSR-NL3 (Workers and Future Residents at MTR Siu Ho Wan Depot), and VSR-LT6 (Travelers of Fuk Hang Tsuen Road).

11.12.1.9 The remaining VSR will be subject to an **Insubstantial** residual impact, namely, VSR-TM2 (Residents of Seaview Garden), VSR-LT2 (Vehicle Travellers on Yuen Long Highway (Eastbound)), and VSR-LT3 (Trail Walkers on Fu Tei Country Trail and Lam Tei Irrigation Reservoir).

Summary of Landscape and Visual Impacts during Operational Phase in Year 10

11.12.1.10 During the operational phase, there will be **Slight** adverse residual impacts after mitigation for LR-PP2 (Plantations in Pillar Point), LR-PP4 (Shrublands in Pillar Point), LR-TM2 (Plantations in Tuen Mun), LR-LT2 (Plantations in Lam Tei), LCA-TM2 (Tuen Mun Upland Fringe Landscape) and LCA-LT4 (Lam Tei Upland Landscape).

11.12.1.11 The remaining LRs, are not affected and would not be any discernible changes. Therefore it would be subject to an **Insubstantial** residual impact in year 10, namely LR-PP10 (Seawater Body in Pillar Point), LR-PP11 (Developed Area in Pillar Point), LR-TM1 (Secondary Woodland in Tuen Mun), LR-TM11 (Developed Area in Tuen Mun), LR-TM13 (Playground in Wah Fat Street), LR-LT1 (Secondary Woodlands in Lam Tei), LR-LT7 (Watercourses in Lam Tei), LR-LT11 (Developed Area in Lam Tei), LR-NL2 (Plantations in Northern Landfall), LR-NL10 (Seawater Body at Northern Landfall), LR-NL11 (Developed Area in Northern Landfall), LCA-PP2 (Pillar Point Upland Fringe Landscape), LCA-PP10 (Lung Mun Road Highway Corridor Landscape), LCA-PP12 (Pillar Point Mixed Modern Institutional Urban Landscape), LCA-PP13 (Pillar Point Mixed Modern Industrial Urban Landscape), LCA-TM4 (Tuen Mun Upland Landscape), LCA-TM11 (Tuen Mun Residential Urban Landscape), LCA-LT2 (Lam Tei Upland Fringe Landscape) and LCA-LT3 (Lam Tei Rural Landscape), LCA-NL8 (Northern Landfall Maritime landscape), LCA-NL10 (Northern Landfall Highway Corridor Landscape.) and LCA-NL13 (Northern Landfall Mixed Modern Industrial Urban Landscape).

11.12.1.12 There would be **Slight** adverse residual visual impacts in Year 10 of the operational phase after mitigation for VSR-TM1 (Residents of Alpine Garden, Rainbow Garden, Kam Fai Garden, Harvest Garden and Hoi Tak Garden), VSR-TM9 (Recreational Users of Wah Fat Garden), VSR-TM10 (Travelers of Wah Fat Street), and VSR-PP1 (Vehicle Travelers at Lung Mun Road).

11.12.1.13 The remaining VSRs will be subject to an **Insubstantial** residual impact in Year 10 of the operational phase after mitigation, namely, VSR-TM2 (Residents of Seaview Garden), VSR-TM3 (Residents of Pearl Island Garden), VSR-TM4 (Visitors at Tuen Mun Promenade), VSR-TM5 (Visitors at Hong Kong Gold Coast Dolphin Square), VSR-TM6 (Maritime Travelers to / from Tuen Mun Ferry Terminal), VSR-TM7 (Vehicle Travelers at Tuen Mun Road), VSR-TM8 (Recreational Users of Tsing Sin Playground), VSR-TM11 (Hikers of MacLehose Trail Section 10), VSR-TM12 (Visitors of Sam Shing Temple in Castle Peak Road – Castle Peak Bay), VSR-PP2 (Workers at EMSD Tuen Mun Vehicle Servicing Station and DSD Pillar Point STW), VSR-PP3 (Workers at River Trade Terminal), VSR-PP4 (Workers at Tuen Mun Area 40), VSR-PP6 (Recreational Users of Butterfly Beach Park), VSR-NL1 (Workers and Travelers at Hong Kong International Airport), VSR-NL2 (Travelers at Hong Kong Boundary Crossing Facilities), VSR-NL3 (Workers and Future Residents at MTR Siu Ho Wan Depot), VSR-LT1 (Residents of Lo Fu Hang), VSR-LT2 (Vehicle Travellers on Yuen Long Highway (Eastbound)), VSR-LT3 (Trail Walkers on Fu Tei Country Trail and Lam Tei Irrigation Reservoir), VSR-LT4 (Visitor of Nam On Fat Tong in Fu Fuk Road), VSR-LT5 (Recreational users of Fuk Hang Tsuen Basketball Court), and VSR-LT6 (Travelers of Fuk Hang Tsuen Road).

Conclusions

11.12.1.14 The Project will inevitably result in some landscape and visual impacts during construction and operation phases. These impacts have been minimized through careful consideration of alternatives to minimize direct conflict with Tai Lam Country Park, minimization of works areas, and incorporation of aesthetic external designs and appropriate landscape and visual treatments along the TMB.

11.12.1.15 Given the design of the TMB proposals, the likely residual impacts on landscape resources in Year 10 will for the most part range from **Slight** adverse to **Insubstantial**.

11.12.1.16 The predicted residual impacts on landscape character in Year 10 from **Slight** adverse to **Insubstantial**, overall.

11.12.1.17 Photomontages to illustrate the landscape and visual impacts are prepared in **Figure 11.12.1 to 11.15.4** in accordance with para. 3.7(j) of Environmental Impact Assessment Ordinance Guidance Note (EIAO GN) No. 8/2010.

11.12.1.18 In accordance with the criteria and guidelines for evaluating and assessing impacts as state in Annex 10, Clause 1.1(c) of the EIAO-TM, overall, it is considered that the residual landscape and visual impacts of the proposed development are **acceptable with mitigation** during the construction and operational phases.