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10 Landscape and Visual Impact Assessment

10.1 Legislation, Standards and Guidelines

10.1.1 General

10.1.1.1 A review of the existing and planned development framework for the Project Site and context has been conducted. Legislation, standards, guidelines and criteria relevant to the consideration of landscape and visual sensitivity in this assessment include the following:

10.1.2 Legislation and Planning Standards

- Environmental Impact Assessment Ordinance (Cap.499. S.16) and the EIAO-TM, particularly Annexes 3, 10, 11, 18 and 20;
- Environmental Impact Assessment Ordinance Guidance Note 8/2010 Preparation of Landscape and Visual Impact Assessment;
- Town Planning Ordinance and Town Planning (Amendment) Ordinance (Cap.131);
- Country Parks Ordinance (Cap.208);
- The Forests and Countryside Ordinance (Cap.96) – prohibiting the felling, cutting, burning or destruction of trees, growing plants and forests on Government land;
- Hong Kong Planning Standards & Guidelines Chapter 4, 10 and 11; and
- Protection of Endangered Species of Animals and Plants Ordinance (Cap.586).

10.1.3 Technical Circulars/ Guidelines

- Development Bureau Technical Circular Works (DEVB TC(W)) No.2/2013 – Greening on Footbridge Flyovers;
- DEVB TC(W) No. 4/2020 – Tree Preservation, February 2020;
- DEVB TC(W) No. 5/2020 – Registration and Preservation of Old and Valuable Trees, February 2020;
- DEVB Greening, Landscape & Tree management Section (GLTM) – Management Guidelines for Mature Trees, December 2014;
- DEVB (GLTM) – Guidelines on Tree Transplanting, September 2014;
- DEVB (GLTM) No. 2/2012 – Allocation of Space for Quality Greening on Roads;

- Environment, Transport and Works Bureau (ETWB) TC(W) No.2/2004 - Maintenance of Vegetation and Hard Landscape Features;
- ETWB TC(W) No. 5/2005 – Protection of streams/ivers from adverse impacts arising from construction works;
- ETWB TC(W) No. 11/2004 Cyber Manual for Greening;
- ETWB TC(W) No. 36/2004 – Advisory Committee on the Appearance of Bridges and Associated Structures;
- Works Bureau Technical Circular (WBTC) No. 25/1993 – Control of Visual Impact of Slopes;
- WBTC No. 7/2002 Tree Planting in Public Works;
- Agriculture, Fisheries and Conservation Department (AFCD) Nature Conservation Practice Note No.2 – Measurement of Diameter at Breast Height (DBH); and
- AFCD Nature Conservation Practice Note No.3 – The Use of Plant Names.

10.1.4 Outline Zoning Plans

- The approved Tung Chung Extension Area Outline Zoning Plan (OZP) No. S/I-TCE/2;
- The approved Tung Chung Town Centre Area OZP No. S/I-TCTC/24;
- The approved Tung Chung Valley Outline Zoning Plan (OZP) No. S/I-TCV/2;
- The adopted Tung Chung Extension Area ODP No. D/I-TCE/1;
- The adopted Tung Chung Town Centre Area (North) ODP No. D/I-TCTCN/1;
- The adopted Tung Chung Town Centre Area (South) ODP No. D/I-TCTCS/1; and
- The adopted Tung Chung Valley ODP No. D/I-TCV/1.

10.1.5 Other Reference Information and Planning Studies

- Landscape Character Map of Hong Kong (2005 Edition);
- “Map of Land Utilization in Hong Kong” by Planning Department;
- Technical Report of “Study on Landscape Value Mapping of Hong Kong” by Planning Department;
- The Register of Old and Valuable Trees – Hong Kong, maintained by the Leisure and Cultural Services Department; and
- Revised Concept Plan for Lantau – May 2007.

10.2 Landscape Impact Assessment Methodology

10.2.1 General

10.2.1.1 The Landscape and Visual Impact Assessment (LVIA) is prepared in accordance with the requirements of the EIA Study Brief issued by Environmental Protection Department (EPD) and the EIAO-TM. Further guidance is given by EIAO Guidance Note 8/2010 and Annexes 10 and 18 of EIAO-TM, Section 3.4.11 and Appendix G of the EIA Study Brief.

10.2.1.2 In accordance with the criteria as stated in Annexes 10 and 18 of EIAO-TM, the LVIA for this project includes:

- a list of the relevant environmental legislation, standards and guidelines;
- a definition of the scope and contents of the Study;
- a review of the relevant planning and development control framework;
- a landscape and visual impact assessment methodology;
- a landscape impact assessment section, comprises:
 - a landscape baseline study, to provide a comprehensive and accurate description of the baseline landscape resources (LRs) and landscape character areas (LCAs);
 - identification of potential landscape impacts;
 - prediction of the nature of landscape impacts and the potential magnitude of changes on the Project, as well as the potential significance of impacts before the implementation of mitigation measures;
 - recommendation of proper mitigation measures and associated implementation programmes; and
 - prediction of the significance of residual landscape impacts after the implementation of the suggested mitigation measures.
- a visual impact assessment section, comprises:
 - a visual baseline study, to provide comprehensive details of visual elements surrounding the Project and their Visually Sensitive Receivers (VSRs);
 - identification of potential visual impacts;
 - prediction of the nature of visual impacts and the potential magnitude of changes on the Project, as well as the potential significance of impacts before the implementation of mitigation measures;
 - recommendation of proper mitigation measures and associated implementation programmes; and

- prediction of the significance of residual visual impacts after the implementation of mitigation measures.
- an assessment of the acceptability of otherwise of the predicted residual impacts, according to the five criteria set out in Annex 10 of the EIAO-TM, namely beneficial, acceptable with mitigation measures, unacceptable or undetermined.

10.2.2 Identification of the Baseline Landscape Resources and Landscape Character Areas

10.2.2.1 The landscape baseline study identifies all LRs and LCAs located within 500m assessment area by site visits and desktop study of topographical maps, information databases, photographs and the ecology section. Aerial Photo is shown in **Figure 10.1**. Types of LR are mapped based on the area of their existing and major physical landscape elements and characteristics.

10.2.2.2 The Project has been divided into broad units of similar character based on a process of landscape characterisation which draws on the information gathered in the desktop study and site surveys. In addition, the Planning Department “*Study of Landscape Value Mapping of Hong Kong*” and “*Map of Land Utilization in Hong Kong*” are also considered. Typical elements which contribute to the landscape character include:

- Local topography;
- Extent and type of vegetation (including woodland, grassland, plantation, etc.);
- Built form (including scale and appearance);
- Patterns of settlement;
- Wildness;
- Land use;
- Scenic spots;
- Prominent watercourses; and
- Cultural and religious features.

10.2.2.3 Details of the identified LRs and LCAs are presented and summarized in **Table 10.4** and **10.5**.

10.2.3 Broad Brush Tree Survey

10.2.3.1 As part of the EIA study carried out for the proposed development project, a broad-brush tree and vegetation survey (refer to Clause 2 Appendix I of EIA SB ESB-329/2020) has been carried out within the study area to identify the baseline conditions of the existing landscape resource and existing trees with the intention to minimize landscape impact. The broad-brush tree and vegetation survey is in aid

of the aerial photos (Digital Orthophoto DOP5000 series of Lands Department (2018 Release)) and the ecology section, and based on the topographical survey conducted prior to the tree survey, and site visits to the Project site.

10.2.3.2 The survey areas are located at North Lantau Highway, Man Tung Road, Yat Tung Estate, Yu Tung Road and Shun Tung Road, the grouped tree survey plan, grouped tree survey schedule and grouped tree photo records are provided in **Appendix 10.2**. The key findings of the broad-brush tree and vegetation survey, including the number of existing trees, dominant species, general health condition and any plant species of conservation interest (including Old and Valuable Tree (OVTs), stonewall tree, Trees of Particular Interest (TPI) nor trees of particular value) has outlined in **Section 10.5.7**.

10.2.4 Sensitivity of Landscape Resources and Landscape Character Areas

10.2.4.1 A qualitative description of LRs and LCAs has been provided and their extent quantified either by area or length. The sensitivity of the LRs and LCAs are evaluated and rated taking into account the following criteria:

- quality of landscape characters/ resources;
- importance and rarity of special landscape elements;
- ability of the landscape to accommodate change;
- significance of the change in local and regional context, and
- maturity of the landscape.

10.2.4.2 The sensitivity ratings are classified as below:

High:	LR or LCA of high quality and value, which is sensitive to even relatively small changes
Medium:	LR or LCA of moderate quality and value, which is reasonably tolerant to change
Low:	LR or LCA of low quality and value, which is largely tolerant to change

10.2.5 Identification of Potential Sources of Impact

10.2.5.1 The permanent or temporary construction works and the operation of the railway extension may generate potential impacts to the existing landscape environment. Any potential sources of impact related to the Project have been identified. Based on preliminary design information, the major impacts will be generated from the following during construction and operational phases of the Project:

Construction Phase

- Site formation and construction of turnouts for realignment of the existing at grade Tung Chung Line (TCL) section from Tuen Mun Chek Lap Kok Link connection point to south of Ying Tung Estate;
- Site formation, site foundation and construction of above-ground Tung Chung East (TCE) Station and associated facilities;
- Site excavation, cut-and-cover and backfilling for the tunnel launching and retrieval shafts for the underground tunnel section for Tung Chung West (TCW) extension alignment;
- Site excavation, open cut/cut-and cover and backfilling for underground TCW Station and the associated facilities;
- Site excavation and construction of Emergency Access Point (EAP)/ Emergency Egress Point (EEP);
- Temporary works areas for site offices and material storage; and
- Barging point.

Operational Phase

- EAP/ EEP Building; and
- TCE Station and TCW Station as well as the associated station entrances and vent shaft structures.

10.2.6 Magnitude of Change to Landscape Resources and Landscape Character Areas

10.2.6.1 The assessment of “Magnitude of Change” for landscape impacts considers the following criteria:

- compatibility of the Project with the surrounding landscape;
- duration of impacts under construction and operational phases;
- scale of development; and
- reversibility of change.

10.2.6.2 The magnitude of change is considered separately for the construction phase and operational phase; the ratings are classified as below:

Large:	LR or LCA will suffer a major change
Intermediate:	LR or LCA will suffer a moderate change
Small:	LR or LCA will suffer a barely perceptible change

Negligible: LR or LCA will suffer no discernible change

10.2.7 Impact Significance in relation to LRs and LCAs

10.2.7.1 The assessment of the “Impact Significance Threshold before Mitigation” for landscape impacts is considered during the construction and operational phases (Day 1 and Year 10) by synthesizing the “Sensitivity” and “Magnitude of Change” for various LRs and LCAs according to **Table 10.1**. The degree of significance has been divided into four thresholds identified below:

Substantial: Adverse/ beneficial impact where the proposals will cause significant deterioration or improvement in existing landscape quality

Moderate: Adverse/ beneficial impact where the proposal will cause a noticeable deterioration or improvement in existing landscape quality

Slight: Adverse/ beneficial impact where the proposal will cause barely perceptible deterioration or improvement in existing landscape quality

Insignificant: No discernible change in the existing landscape quality

Table 10.1 Relationship between sensitivity of LR/ LCA and magnitude of change in defining impact significance

		Receptor Sensitivity (of LR/ LCA)		
		Low	Medium	High
Magnitude of Change	Negligible	Insignificant	Insignificant	Insignificant
	Small	Slight	Slight/ Moderate	Moderate
	Intermediate	Slight/Moderate	Moderate	Moderate/ Substantial
	Large	Moderate	Moderate/ Substantial	Substantial

10.2.8 Identification of Potential Landscape Mitigation Measures

10.2.8.1 Identification of potential mitigation measures, alternative design, and/or alignment, and/ or construction methodologies that will make the Project more compatible with its landscape setting. Alternative design, and/ or alignment, and/ or construction methodologies that will avoid or reduce landscape impacts are considered before adopting other mitigation measures. Design considerations/ options that have been explored before arriving to the recommended alignment as

discussed in **Section 2** whilst **Section 10.9** has discussed how the Project is compatible with its local context.

10.2.8.2 Mitigation measures are considered for both construction and operational phases to prevent or minimise unavoidable adverse impacts and/ or generate beneficial long-term impacts. To ensure their effectiveness throughout the construction and operational phases, the relevant responsible parties for the on-going management and maintenance of the proposed mitigation measures have been identified.

10.2.9 Residual Landscape Impact Assessment Methodology

10.2.9.1 This part of the assessment describes any residual adverse landscape impacts to LRs and LCAs. Residual impacts are those which remain after commissioning of the development (operation Day 1 & Year 10) with mitigation measures implemented.

10.2.9.2 The level of impact is derived from the magnitude of change which the Project will cause to the LR or LCA taking into account its ability to tolerate change and effectiveness of mitigation measures.

10.3 Visual Impact Assessment Methodology

10.3.1 General

10.3.1.1 The assessment area for visual impact assessment is defined in accordance with EIAO Guidance Note No. 8/2010, the 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). It includes the areas within 500m from the project boundary and within the Visual Envelope (VE) that could potentially see the Project and defines the limit of its visibility.

10.3.2 Identification and Plotting of the Visual Envelope

10.3.2.1 The assessment area is defined by the VE which includes all the points from which the scheme proposals may be visible, comprising the viewshed formed by natural/ manmade features such as ridgelines, built form or areas of woodland/ large trees. This area is identified through a combination of detailed field surveys, desktop study and review of aerial photography.

10.3.2.2 The VE includes the areas of North Lantau, Chek Lap Kok and Hong Kong International Airport (HKIA). TCL realignment are fairly enclosed by prominent green hill slopes in close proximity to the south, by the inshore water immediately to the north and west, and by the Tung Chung New Town Extension (TCNTE) East to the north while TCW extension alignment is enclosed by Yat Tung Estate in

close proximity to the east, Mun Tung Estate to the south, Wong Lung Hang estuary to the west and Tung Chung Bay to the north.

10.3.3 Identification of VSRs within the Visual Envelope

10.3.3.1 The VSRs represent the people who would reside within, work within, play within, or travel through. The VSRs for the visual impact assessment are identified within the VE.

10.3.3.2 The selection of VSRs have considered the latest locations of above-ground structures including stations, vent shaft structures, station entrances, EAP/ EEP, etc.

10.3.4 Sensitivity of VSRs

10.3.4.1 VSRs within the VE during the construction and operational phases of the development are identified. Views from these points are recorded, described and the sensitivity assessed.

10.3.4.2 The assessment of sensitivity is based on the quality and extent of the existing view. The factors affecting the sensitivity of receivers for evaluation of visual impacts include the following:

- The type of VSRs, 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.
- Other factors which are considered (as required by EIAO Guidance Note 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.

10.3.4.3 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.

10.3.4.4 The duration of the impact during construction and operation is determined based on the following ratings:

Construction:

Temporary Construction works that will only be visible for a short duration of the overall construction period

Permanent Construction work will be visible throughout the whole construction period

Operation:

Permanent Views of the Project that will remain permanently open to the view

10.3.5 Prediction of Visual Impact Based on Field of View

10.3.5.1 The visual impact of a development can be quantified by reference to the degree of influence on a person's field of vision referencing the typical parameters of human vision based on anthropometric data. These data provide a basis for assessing and interpreting the impact of a development by comparing the extent to which the development would intrude into the centre field of vision (both vertically and horizontally, refer to **Appendix 10.1** - Prediction of Visual Impact Based on Field of View).

10.3.6 Identification of Potential Sources of Visual Impact

10.3.6.1 These are the various elements of the construction works and operational procedures that could generate visual impacts. They will create varying levels of visual impact due to factors such as visual obstruction, degradation of the quality of existing views and incompatibility with the surrounding landscape setting.

10.3.7 Magnitude of Change to VSRs

10.3.7.1 Magnitude of change to an existing view can be determined by a number of interrelated factors, including:

- compatibility of the Project with the surrounding landscape;
- duration of impacts under construction and operational phases;
- scale of development;
- reversibility of change;
- viewing distance; and
- potential obstruction of view.

10.3.7.2 The magnitude of changes at different stages of the construction and operational phases are considered separately, with ratings set out below:

- Large:** The VSRs would suffer a major change in their viewing experience
- Intermediate:** The VSRs would suffer a moderate change in their viewing experience
- Small:** The VSRs would suffer a small change in their viewing experience
- Negligible:** The VSRs would suffer no discernible change in their viewing experience

10.3.8 Impact Significance in relation to VSRs

10.3.8.1 The impact significance to VSRs deals with the prediction of “Impact Significance Threshold before Mitigation” for visual impacts through combining the “Sensitivity to Change” and “Magnitude of Change” for various VSRs according to **Table 10.2** below.

10.3.8.2 The degree of significance is divided into four thresholds:

- Substantial:** Adverse/ beneficial impact where the proposal would cause significant deterioration or improvement in existing visual quality
- Moderate:** Adverse/ beneficial impact where the proposal would cause a noticeable deterioration or improvement in existing visual quality
- Slight:** Adverse/ beneficial impact where the proposal would cause a barely perceptible deterioration or improvement in existing visual quality
- Negligible:** No discernible change in the existing visual quality

Table 10.2 Relationship between sensitivity of VSRs and magnitude of change in defining impact significance

		Receptor Sensitivity (of VSR)		
		Low	Medium	High
Magnitude of Change	Negligible	Insignificant	Insignificant	Insignificant
	Small	Slight	Slight/ Moderate	Moderate
	Intermediate	Slight/ Moderate	Moderate	Moderate/ Substantial
	Large	Moderate	Moderate/ Substantial	Substantial

10.3.9 Identification of Potential Visual Mitigation Measures

10.3.9.1 Identification of potential mitigation measures, alternative design configurations, design and construction methodologies that will make the Project visually more compatible with its landscape setting are examined before adopting other mitigation measures. Mitigation measures are considered for both construction and

operational phases to prevent or minimise unavoidable adverse impacts and/ or generate beneficial long-term impacts.

10.3.10 Residual Visual Impacts Assessment Methodology

10.3.10.1 This part of the assessment indicates the influence on VSRs after applying mitigation measures, assuming that all proposed measures and guidelines would be fully implemented. Residual impacts are those impacts which remain after commissioning of the development (operation Day 1 & Year 10) with mitigation measures implemented.

10.3.10.2 The level of impact is derived from the magnitude of change which the Project will cause to the existing view and its ability to tolerate change, i.e. the quality and sensitivity of the view taking into account the beneficial effects of the proposed mitigation.

10.3.11 Cumulative Impact Assessment

10.3.11.1 This section reviews the projects currently in progress or planned/committed developments nearby the site boundary. Construction of these projects will result in cumulative landscape and visual impacts including the loss of landscape resources and landscape character, and the degradation of visual quality.

10.3.11.2 Mitigation measures to address the cumulative impacts would be incorporated into the design of each project. The resulting changes to the existing landscape character, landscape resources and visual quality have been taken into account in the assessment. Cumulative impacts from these projects are therefore taken into account through their inclusion in the baseline conditions.

10.3.12 Overall result of the Landscape and Visual Impact Assessment

10.3.12.1 An overall assessment is made on the development based on the identified landscape and visual impacts as follows:

Table 10.3 Residual impact assessment methodology

Overall Result of LVIA Assessment	Description
Beneficial	The impact is beneficial if the Project will complement the landscape and visual character of its setting, will follow the relevant planning objectives and will improve overall and visual quality
Acceptable	The 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 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 impact is unacceptable if the adverse effects are considered too excessive and are unable to mitigate practically
Undetermined	The 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 for the specific effects in question

10.4 Review of Planning and Development Control Framework

10.4.1 General

10.4.1.1 A review of the existing planning and development framework for the Project Site and its context is conducted in order to:

- Identify issues/ conflicts in relation to the Project;
- Identify the potential resources and sensitive receivers; and
- Identify any synergies with the proposed works and the surroundings.

10.4.1.2 The following statutory plans and departmental plans fall within the 500m assessment area:

- The approved Tung Chung Extension Area OZP No. S/I-TCE/2;
- The approved Tung Chung Town Centre Area OZP No. S/I-TCTC/24;
- The approved Tung Chung Valley Outline Zoning Plan (OZP) No. S/I-TCV/2;
- The adopted Tung Chung Extension Area ODP No. D/I-TCE/1;
- The adopted Tung Chung Town Centre Area (North) ODP No. D/I-TCTCN/1;
- The adopted Tung Chung Town Centre Area (South) ODP No. D/I-TCTCS/1; and
- The adopted Tung Chung Valley ODP No. D/I-TCV/1.

10.4.1.3 The review of OZPs is 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.

10.4.1.4 No natural woodland or high landscape value found will be in direct conflict with any work sites/ areas. All aboveground work areas will fall within various zonings on the OZPs, including "Government/Institution or Community" ("G/IC"), "Open Space" ("O"), "Village Type Development" ("V") and "Other Specified Uses" annotated "Railway Station" ("OU(Railway Station)"), Major Road and Junction (MRDJ), "Residential (Group A)" ("R(A)") and "Residential (Group B)" ("R(B)1"). The layout has been superimposed onto the existing OZP to determine whether there is an effect on the zoned use in **Figure 10.2**.

10.4.2 General Description of the Project Site

10.4.2.1 As discussed in **Section 2**, the Project consists of east and west sections. The eastern section is the proposed realignment of the existing TCL and the provision of a new at-grade TCE Station which are located along the TCNTE new reclamation area of TCE. The western section is the tunnel connecting the existing Tung Chung Station (TUC) with the new TCW Station to the west of Yat Tung Estate.

10.4.2.2 While the eastern section is located on existing developed area, the western section will go underneath Rocky Lion Hill along Shun Tung Road and the coast of Ma Wan Chung before reaching the new TCW Station west of Yat Tung Estate. While the entire extension alignment would be underground, there are aboveground works sites/works areas at the tunnel boring machine (TBM) launching and retrieval shafts, the cut-and-cover works site for the TCW Station box, EAP/EEP, station entrance, vent shaft structures, site reinstatement, material storage and site offices.

10.4.2.3 In addition, a north-south visual corridor was planned to connect the TCE Station to the northern end of the TCNTE reclamation area, this visual corridor is one of the planning considerations during the preparation of the Recommended Outline Development Plan (RODP) adopted in the approved EIA report for TCNTE. The current design of the TCE Station has maintained the same planning approach to align with this intention of the visual corridor.

10.4.3 Design Intention of the Proposed Developments

Compatibility to the TCNTE Development

10.4.3.1 The design of both the TCE and TCW Stations has followed the design intention recommended in the TCNTE EIA Study as far as practicable. It would help to maintain the design initiative and improve compatibility with the TCNTE development.

Design Intentions of Visual Enhancement

10.4.3.2 The development of proposed station, footbridge and entrances structures incorporate the design intentions of integrating with the planned environ of Metro Core District as a gateway to Tung Chung East and regional commercial hub and creating an interesting and vibrant pedestrian environment by various design features.

Minimization of the Above-ground Structures

10.4.3.3 The above-ground structures have been proactively designed to alleviate the bulk of the structures. In addition, transparent glass panels have also been considered to allow natural light to penetrate into the structures. These would help to reduce the associated visual impacts.

Avoidance of Mature Woodland

10.4.3.4 The design has critically reviewed the possibility of the location of EAP/ EEP to avoid loss in mature woodland. After a due review on various design requirements, the location of EAP/ EEP has located to an artificial slope at Shun Tung Road at which only plantation is identified. Hence, the landscape and visual impact is minimized.

Adoption of Street Level Planting

10.4.3.5 Small plants are planted to form a partial screen to visually buffer the EAP/ EEP. All plants should be of reasonable size to improve compatibility with the surrounding environment to alleviate landscape and visual impacts.

Provision of Green Roof

10.4.3.6 The green roof planting without individual containers will be adopted on the top of the architecture of both TCW and TCE Stations. Species will be selected with subtle gradation and modulation of their colours, formal architecture of their leaves and flowers and their suitability.

10.5 Landscape Baseline Study

10.5.1 Landscape Baseline Conditions

10.5.1.1 The assessment area covers from Tai Ho Wan to the Wong Lung Hang to the west and major highway infrastructures including North Lantau Highway (NLH) and Yu Tung Road. Within the assessment area, there are artificial slopes on lowland and natural terrain including woodland, shrubland and grassland along these roads.

10.5.1.2 At the northern part of TCE, it is a reclaimed land associated with urban infrastructure. Urban areas are mainly planned along the main roads with a view to the sea or strait and a backdrop of Lantau mountains.

10.5.1.3 Villages are commonly found in between the access roads and the woodland areas at TCW. Some patches of Fung Shui Woods can be identified near the villages e.g. Sheung Ling Pei and Ngau Au within the assessment area. Agricultural lands are also found within TCW, some of the active agricultural lands are planted with orchards near Ngau Au.

10.5.1.4 Water bodies include two types coastal waters to the north of the assessment area and ecologically important watercourses originated from Lantau mountains and flowing towards the coastal bay of Tung Chung. They run from the south to the north with intertidal flora and natural stones as important landscape elements.

10.5.1.5 Tung Chung contains two types of shorelines. For the reclamation at TCE, there are artificial seawall and shorelines. The natural shorelines remain in the west of Tung Chung.

10.5.2 Identified Landscape Resources

10.5.2.1 LRs can be classified into the following categories, and shown in **Figure 10.3**:

- LR1 Secondary Woodland;
- LR2 Shrubland and Grassland;
- LR3 Plantation;
- LR4 Fung Shui Woodland;
- LR5 Agricultural Land;
- LR6 Mangrove;
- LR7 Reedbed;
- LR8 Coastal Water;
- LR9 Transitional Water;
- LR10 Watercourse;
- LR10a Natural Watercourse;
- LR10b Channelized watercourse;
- LR11 Natural Shoreline;
- LR11a Mudflat;
- LR11b Rocky Shore;
- LR12 Artificial Seawall;
- LR13 Road, Urban Infrastructure and Major Transport Corridor;
- LR13a Major Transport Corridor;
- LR13b Road and Infrastructure;

- LR14 Village Type Development;
- LR15 Urbanised Development; and
- LR16 Ongoing Reclamation Area.

10.5.3 Sensitivity of Landscape Resources

10.5.3.1 LRs affected by the Project within 500m of the subject site have been identified and mapped using a combination of aerial photography followed by on site verification. Each component affecting the sensitivity of the LR have been reviewed in relation to:

- Quality of landscape character/ resources;
- Importance and rarity of special landscape elements;
- Ability of the landscape to accommodate change;
- Significance of the change in local and regional context; and
- Maturity of the landscape.

10.5.3.2 Physical LRs are the natural components of the landscape and include geology, topography, soil, vegetation, and hydrological features. Each LR possesses a varying sensitivity to development. Therefore, the 500m assessment area incorporates a diversity of LRs of greatly varying extents and sensitivities.

10.5.3.3 The sensitivity of LRs is assessed in **Table 10.4** with detailed descriptions. The photo records of each LR are shown in **Figure 10.4a to 10.4e**.

Table 10.4 Identified LRs and their sensitivity

ID Code	Extent (ha./ m)	Quality (High/Medium/Low)	Rarity (High/Medium/Low)	Importance (Local/Regional/National/Global)	Ability to Accommodate Change (Low/Medium/High)	Maturity (Low/Medium/High)	Sensitivity (Low/Medium/High)
LR1	59.2	High	High	Local	Low	Medium	High
<p>Secondary Woodland</p> <p>This LR refers to secondary woodland on the foothills and slopes within the assessment area, which are scattered over the slopes to the west of Tai Ho Wan, the southeast of NLH, slopes near Ma Wan Chung, New Tung Chung Hang, Ngau Au and Wo Liu Tun. Dominant species are <i>Cratogeomys cochinchinense</i>, <i>Cinnamomum burmannii</i> and <i>Microcos nervosa</i>. Some species of conservation importance are recorded within the assessment area, included <i>Aquilaria sinensis</i>, <i>Dalbergia assamica</i>, <i>Ligustrum punctifolium</i> and <i>Pavetta hongkongensis</i>. Generally, the distribution and extent of the LR are relatively patchy and has a low capacity to accept change as a result of its naturalness and maturity. Meanwhile, given several rare and protected species are recorded within this LR, therefore the rarity, landscape quality and value are considered as High. The overall sensitivity is rated as High.</p>							
LR2	116.5	Medium	Medium	Local	Low	Medium	Medium
<p>Shrubland & Grassland</p> <p>This LR refers to shrubland and grassland on the hills near Tai Ho Wan and to the south of NLH. The LR can also be found near Ma Wan Chung, as well as the both western and eastern sides of New Tung Chung Hang. The LR dominates the landscape resources on hillsides and adjoins patches of secondary woodland and plantation within assessment area. It is composed mainly of common species including <i>Apocynaceae</i>,</p>							

ID Code	Extent (ha./ m)	Quality (High/Medium/Low)	Rarity (High/Medium/Low)	Importance (Local/Regional/National/Global)	Ability to Accommodate Change (Low/Medium/High)	Maturity (Low/Medium/High)	Sensitivity (Low/Medium/High)
	<p><i>Broussonetia papyrifera</i>, <i>Cinnamomum burmannii</i> and <i>Schima superba</i> combined with grassland. The landscape quality and maturity are considered as Medium. The overall sensitivity is rated as Medium.</p>						
LR3	19.1	Medium	Medium	Local	Medium	Medium	Medium
	<p>Plantation</p> <p>This LR refers to tree planting found on engineered slopes along NLH, Yu Tung Road and Shun Tung Road. The dominant species are <i>Acacia confusa</i>, <i>Casuarina equisetifolia</i>, <i>Eucalyptus robusta</i> and <i>Schima superba</i>. The LR is considered to have a medium capacity to accept change given it is managed natural. Besides, even the maturity and contribution of this LR to landscape amenity are valuable, in particular when providing green coverage to engineered slopes and roadsides, it is a common resource, and no rare or protected species are found. The maturity, rarity and quality are therefore considered as Medium. The overall sensitivity is rated as Medium.</p>						
LR4	1.3	High	High	Regional	Low	High	High
	<p>Fung Shui Woodland</p> <p>This LR refers to woodland composed of a mixture of native and exotic tree species preserved during village development and are characterised by old age and high flora diversity, which can be found in Sheung Ling Pei and Ngau Au. Dominant tree species includes <i>Cleistocalyx nervosum</i>, <i>Syzygium jambos</i>, <i>Bischofia javanica</i> and <i>Aporosa dioica</i>. Given the maturity, cultural significance and rareness of this LR, and with low capacity to accommodate change, the rarity and quality are therefore considered to be High. The overall sensitivity is rated as High.</p>						
LR5	32.6	Medium	Medium	Local	Medium	Medium	Medium
	<p>Agricultural Land</p> <p>This LR refers to orchards scattered over Tung Chung Valley and can be found in Ma Wan Chung, Ngau Au, Shek Lau Po and the west side of the Yu Tung Road. Agricultural land includes dry vegetable farms, community/organic farms and orchards. Dominant tree species includes <i>Clauseria lansium</i>, <i>Litchi chinensis</i>, <i>Dimocarpus longan</i> and <i>Artocarpus heterophyllus</i>. A variety of crops including vegetables, fruit trees and flowers are cultivated. Most orchards are densely planted with fruit trees including banana, longan, lychee and wampi and appeared to be managed. As this LR generally does not include built form although has undergone change as a result of human activities, it is considered to have a medium capacity to accept change. The rarity and quality are considered as Medium as no rare or protected species are found within this LR. The overall sensitivity is rated as Medium.</p>						
LR6	4.4	High	High	Regional	Low	High	High
	<p>Mangrove</p> <p>This LR refers to areas of mangrove located within the intertidal zone of Tung Chung Bay and Ma Wan Chung. The largest mangrove stand can be found at the west of Tung Chung River estuary. Extent of the LR is limited and plant species of conservation importance such as <i>Ligustrum punctifolium</i> is found. The rarity is therefore considered to be High. Furthermore, this LR contributes significantly to the coastline/ bay landscape character, and hence the landscape quality is also considered to be High. The overall sensitivity is rated as High.</p>						
LR7	0.7	High	High	Local	Low	Medium	High
	<p>Reedbed</p> <p>This LR refers to a small stand of reedbed located along the fringe of the mangrove stand within the intertidal zone of Tung Chung Bay. The LR is semi-natural, established from abandoned agricultural land along coastal area through succession. The extent of the LR is very limited, and the capacity to accept change is low, and hence the landscape quality and rarity are considered to be High. The overall sensitivity is rated as High.</p>						
LR8	126.2	Medium	Medium	Local	Medium	N/A	Medium
	<p>Coastal Water</p> <p>This LR refers to the seawater (excluding transitional waters) within Tung Chung Bay, and the open water at north of Tung Chung. In general, this natural LR has a Medium capacity to accept change. Given there</p>						

ID Code	Extent (ha./ m)	Quality (High/ Medium/ Low)	Rarity (High/ Medium/ Low)	Importance (Local/ Regional/ National/ Global)	Ability to Accommodate Change (Low/ Medium/ High)	Maturity (Low/ Medium/ High)	Sensitivity (Low/ Medium/ High)
	are reclamation works nearby (i.e. TCNTE), the landscape quality is considered to be Medium. The overall sensitivity is rated as Medium .						
LR9	13.1	High	High	Local	Low	N/A	High
	<p><u>Transitional Water</u></p> <p>This LR refers to the water with estuary to the Tung Chung Bay, where a mixture of freshwater and brackish water exists. In general, the capacity to change of this LR is low. This LR is localized to the natural coastal and estuary which is providing quality landscape amenity and supporting adjacent coastal habitat e.g. mangroves along this area. Therefore, the rarity is considered to be High. Natural coastline interfaces enhance the landscape quality is considered to be High. The overall sensitivity is rated as High.</p>						
LR10a	4.6	High	High	Local	Low	N/A	High
	<p><u>Natural Watercourse</u></p> <p>This LR refers to natural watercourse within the assessment area including Tung Chung River, Wong Lung Hang nullah and Tai Ho Stream. Smaller tributary streams originated from the uphill feeding the larger streams which then enter Tung Chung Bay and Tai Ho Wan. Watercourses in this area are renowned for their waterfalls, exceptional habitat quality and natural form. Plant species recorded along the natural stream sections include <i>Microcos nervosa</i>, <i>Hibiscus tiliaceus</i> and <i>Macaranga tanarius</i>. Given the naturalness and relative vulnerability of the LR it is considered to have a Low capacity to accept change. Meanwhile, three Ecologically important Streams (EIS) including Wong Lung Hang nullah and two branches of Tung Chung River can be found within the assessment area, therefore the rarity and landscape quality are considered to be High. The overall sensitivity is rated as High.</p>						
LR10b	1.7	Low	Low	Local	High	N/A	Low
	<p><u>Channelised Watercourse</u></p> <p>This LR refers to a section of the Tung Chung River and the Wong Lung Stream where it enters a culvert and open channel system prior to discharging into Tung Chung Bay. Sections of natural streams have been altered as a result of channelisation. Whilst these sections are limited their interfere with predominantly pristine watercourse systems. Given the artificial nature of the LR it is considered to have a High capacity to accept change. They are fairly common in the area, so the landscape quality and rarity are considered to be Low. The overall sensitivity is rated as Low.</p>						
LR11a	9.2	High	Medium	Local	Low	N/A	High
	<p><u>Mudflat</u></p> <p>This LR refers to extensive areas of mudflats at Tung Chung Bay area and small patches in Tai Ho Wan. This LR recognises the tidal range of this resource and fundamental link to LR9 Transitional Waters. Due to the naturalness of the LR, the capacity to accept change is considered as Low. While the LR is an important contributor to landscape character of the coastal area, the landscape quality is considered as High. The overall sensitivity is rated as High.</p>						
LR11b	0.5	High	High	Local	Low	N/A	High
	<p><u>Rocky Coastline</u></p> <p>This LR refers to small stretches of rocky shore located on the southwestern shoreline of Scenic Hill and the shore to the North of Tung Chung Battery. Due to the naturalness of the LR, it is considered to have a Low capacity to accept change. LR is limited in its extent, and hence the rarity is considered to be High. The LR is an important contributor to landscape character of the coastal area, therefore the landscape quality is considered to be High. The overall sensitivity is also High.</p>						
LR12	2.9	Low	Low	Local	Low	N/A	Low
	<p><u>Artificial Seawall</u></p> <p>This LR refers to artificial coastline formed along reclaimed areas along TCE waterfront. It comprises of a combination of vertical and inclined seawalls. As a result of the artificial nature of the resource, it is considered to have a High capacity to accept change with low landscape quality. The LR is very common therefore the rarity is Low. The overall sensitivity is Low.</p>						

ID Code	Extent (ha./ m)	Quality (High/Medium/Low)	Rarity (High/Medium/Low)	Importance (Local/Regional/National/Global)	Ability to Accommodate Change (Low/Medium/High)	Maturity (Low/Medium/High)	Sensitivity (Low/Medium/High)
LR13a	36.6	Low	Low	Regional	High	Low	Low
	<p><u>Major Transport Corridor</u></p> <p>This LR refers to the major infrastructure corridors forming the NLH, Shun Long Road and TCL. Generally, these routes are predominantly formed of engineered structures/barriers, modified slopes & embankments, road or rail lines and hard surfacing/ ballast, with roadside amenity planting. As a result of the man-made nature of the LR, it has a High capacity to accept change. This is a common LR in the vicinity, therefore the rarity is Low. Due to extensive hard surfacing, lack of vegetation cover, the landscape quality is considered to be Low. The overall sensitivity is rated as Low.</p>						
LR13b	39.4	Low	Low	Local	High	Low	Low
	<p><u>Road & Urban Infrastructure</u></p> <p>This LR refers to main pedestrian routes with tree avenues and amenity landscape area throughout the assessment area. A combination of mature avenue trees, grassed areas, and ornamental shrubs provide structure to the environment and enhance the landscape and visual integration of the road system. Plant species recorded along the roadside include <i>Ficus microcarpa</i>, <i>Eucalyptus robusta</i>, <i>Bauhinia blakeana</i> and <i>Livistona chinensis</i>. Some protected species are recorded within the assessment area, included <i>Lagerstroemia speciosa</i> and <i>Magnolia denudata</i>. Given the man-made nature of the LR, it generally has a High capacity to accept change. However mature landscape planting limits this capacity at points. This is a common LR in the vicinity, the rarity is therefore considered to be Low. The landscape quality is also considered to be Low given the dominance of engineered structures and hard landscape treatments. The overall sensitivity is rated as Low.</p>						
LR14	23.7	Medium	Medium	Local	Medium	Medium	Medium
	<p><u>Village Type Development</u></p> <p>This LR refers to the scattered settlements, low-rise residential building clusters, small holdings, and mixed vegetation. It can be found around Tung Chung Bay, Ngau Au, Shek Lau Po, and along the south side of Yu Tung Road. Some landscape treatment can be found, such as private amenity planting. This LR is dominated by orchards of densely planted fruit trees <i>Litchi chinensis</i>, <i>Dimocarpus longan</i> and <i>Artocarpus heterophyllus</i>. Given the built nature of the LR, it has a Medium capacity to accept change. And it is common within the vicinity therefore the rarity is considered to be Medium. The landscape quality is considered to be Medium given the vernacular and conventional nature of the resource. The overall sensitivity is rated as Medium.</p>						
LR15	147.5	Low	Low	Local	High	Low	Low
	<p><u>Urbanised Development</u></p> <p>This LR refers to the urbanised areas of Tung Chung including the main residential developments, commercial, educational, and recreational development forming Tung Chung. The dominant species are <i>Acacia mangium</i>, <i>Ficus microcarpa</i>, <i>Casuarina equisetifolia</i> and <i>Livistona chinensis</i>. A combination of municipal roadside amenity planting, planting associated with private residential courtyard areas, ornamental planting within public parks and recreational spaces. Given the built nature of the LR it has a High capacity to accept change. The rarity is considered to be Low. The landscape quality is considered to be Low given the formalised nature of the majority of the resource. The overall sensitivity is rated as Low.</p>						
LR16	97.8	Low	Low	Local	High	N/A	Low
	<p><u>Ongoing Reclamation Area</u></p> <p>This LR refer to the reclamation area which is constantly evolving at TCNTE. Given works are constantly evolving and assessing a baseline for specific resources is not possible due to the continual state of flux. The capacity to accept change is considered as Low and the landscape quality is considered to be Low. The overall sensitivity is rated as Low.</p>						

10.5.4 Summary of Landscape Resources and their Sensitivity

10.5.4.1 High sensitivity LRs are generally natural elements with little human intervention, included LR1 Secondary Woodland, LR4 Fung Shui Woodland, LR6 Mangrove, LR7 Reedbed, LR9 Transitional Water, LR10a Natural Watercourse, LR11a Mudflat, and LR11b Rocky Coastline.

10.5.4.2 LRs with Medium sensitivity are considered less valuable and common resources, included LR2 Shrubland & Grassland, LR3 Plantation, LR5 Agricultural Land, LR8 Coastal Water and LR14 Village Type Development.

10.5.4.3 LRs with low sensitivity are included LR10b Channelised Watercourse, LR12 Artificial Seawall, LR13a Major Transport Corridor, LR13b Road & Urban Infrastructure, LR15 Urbanised Development, and LR16 Ongoing Reclamation Area, as a result of their artificial nature and lower landscape significance.

10.5.5 Sensitivity of Landscape Character Areas

10.5.5.1 The landscape character of the 500m assessment area has been influenced by many different types and scales of human development set within a dramatic natural landscape of mountains, urban development landscape and coastal areas. This has formed a series of LCAs of varying landscape value and development sensitivity.

10.5.5.2 The sensitivity of LCA is assessed in **Table 10.5** with detailed descriptions. The extents of these LCAs are presented in **Figure 10.5**. The photos of each LCAs are shown in **Figure 10.6a to 10.6d**.

Table 10.5 Identified LCAs and their sensitivity

ID Code	Extent (ha.)	Quality (High/Medium/Low)	Rarity (High/Medium/Low)	Importance (Local/Regional/National/Global)	Ability to Accommodate Change (Low/Medium/High)	Maturity (Low/Medium/High)	Sensitivity (Low/Medium/High)
LCA1	96.1	Medium	Medium	Local	High	N/A	Low
	<p><u>Inshore Water Landscape</u> This LCA refers to waterscape at north side of Tung Chung, which is predominantly constructed in artificial stone revetment. The LCA has historically been encroached upon through phases of reclamation to form the NLH, Tung Chung waterfront and Hong Kong International Airport (HKIA). It is therefore considered that the LR has a high capacity to accept change. Given this is a common LCA, its rarity is therefore Low. Seascape is a contributor to landscape character; the landscape quality is considered to be Medium. The overall sensitivity is rated as Medium.</p>						
LCA2	46.7	Medium	Medium	Local	Medium	N/A	Medium
	<p><u>Strait Landscape</u> This LCA refers to the narrow channel located between the southern coastline of HKIA and Tung Chung, which is artificial rock revetment whereas the natural coastline remains intact on the Chek Lap Kok side with narrow beaches and rocky shoreline. The strait has already undergone works by developments over the years. It is therefore considered to have a Medium capacity to accept further change. The channel formation is formed by land reclamation albeit partly including the mouth of Tung Chung Bay which is natural. The rarity and landscape quality are therefore considered to be Medium. The overall sensitivity is rated as Medium.</p>						
LCA3	21.9	High	High	Local	Low	High	High

ID Code	Extent (ha.)	Quality (High/Medium/Low)	Rarity (High/Medium/Low)	Importance (Local/Regional/National/Global)	Ability to Accommodate Change (Low/Medium/High)	Maturity (Low/Medium/High)	Sensitivity (Low/Medium/High)
	<p><u>Inter-tidal Coast Landscape</u></p> <p>This LCA refers to natural intertidal beach, mudflat, and foreshore of Tung Chung Bay. The bay remains relatively natural therefore it has a Low capacity to accept change. The rarity is rated as High due to the loss of similar features as a result of other reclamation works in the vicinity. The landscape quality is considered to be High. The overall sensitivity is rated as High.</p>						
LCA4	27.7	High	High	Local	Low	Medium	High
	<p><u>Coastal Upland and Hillside Landscape</u></p> <p>This LCA refers to natural upland prominences generally above 40mPD along the coastal interface, including Scenic Hill and foothill near Ma Wan Chung. As a result of the natural and wildness of this LCA, it has a Low capacity to accept change. It is a natural LCA within the vicinity and across Tung Chung Area, the rarity and landscape quality are therefore considered as High. The overall sensitivity is rated as High.</p>						
LCA5	39.2	Medium	Medium	Local	Low	High	High
	<p><u>Settled Valley Landscape</u></p> <p>This LCA refers to the scattered settlements, tracks, forests, agricultural plots and natural landscape in the upper Tung Chung Valley above 40mPD, which are scattered near Lung Tseng Tau and Pak Mong. Human developments are embedded into the surrounding hillside forests, are small in scale and do not overly detract from the dramatic mountain backdrop. The natural nature of this LCA results in a Low capacity to accept change. It is a quite common LCA within the vicinity and across Tung Chung. As a result, the rarity is rated as Medium. The landscape quality is considered to be Medium. The overall sensitivity is rated as High.</p>						
LCA6	118.5	High	High	Local	Low	High	High
	<p><u>Upland Hillside Landscape</u></p> <p>This LCA refers to natural upland hillside landscape within the assessment area generally above 40mPD. The natural terrain comprises mainly shrubland/ grassland with some strips of secondary woodland and rocky outcrops. As a result of the natural terrain, the capacity to accept change is Low. The LCA is relatively common and hence has a rarity rating of High. The landscape quality is considered to be High. The overall sensitivity is rated as High.</p>						
LCA7	134.2	Low	Low	Local	High	Medium	Low
	<p><u>Reclamation/ Ongoing Major Development Landscape</u></p> <p>This LCA refers to ongoing development at the reclamation area at construction site of TCNTE. As this LCA comprises a development plot on reclaimed land, it has a High capacity to accept change. It has a Low rating in terms of rarity. The landscape quality is considered to be Low given no vegetation are found. The overall sensitivity is rated as Low.</p>						
LCA8	54.5	Low	Low	Local	High	Low	Low
	<p><u>Transportation Corridor Landscape</u></p> <p>This LCA refers to the transport corridor approaching Tung Chung, which is connecting between HKIA with Lantau Island, which comprises NLH, TCL, and AEL. The corridor is entirely built on top of reclaimed landscape. Vegetation cover is restricted to narrow verges with grass, hedge, and small tree planting. As a result of the man-made nature of the LR, it is considered to have a High capacity to accept change. Infrastructure routes are not considered to be rare therefore the rating is Low. Given the man-made nature and minimal vegetation coverage, the landscape value is considered to be Low. The overall sensitivity is rated as Low.</p>						
LCA9	108.5	Low	Low	Local	High	Medium	Low
	<p><u>Mixed Modern Comprehensive Urban Development Landscape</u></p> <p>This LCA refers to the central high rise residential and commercial area of Tung Chung. It comprises a series of public open spaces and waterfront promenade with landscape amenity area. It also includes recreational private green spaces, e.g. formal tree avenues, specimen tree and shrub planting, private courtyards, swimming pools and recreation areas. As this LCA has been heavily developed and formed on</p>						

ID Code	Extent (ha.)	Quality (High/Medium/Low)	Rarity (High/Medium/Low)	Importance (Local/Regional/National/Global)	Ability to Accommodate Change (Low/Medium/High)	Maturity (Low/Medium/High)	Sensitivity (Low/Medium/High)
	reclaimed land, it has a High capacity to accept change. The rarity is considered as Low and given this is not a rare LCA. The landscape contains some mature planting and formalised landscape spaces which provide important landscape amenity. The landscape value and quality is Low. The overall sensitivity is rated as Low .						
LCA10	58.8	Medium	Medium	Local	Medium	Medium	Medium
	<p><u>Urban Peripheral Village and Rural Fringe Landscape</u></p> <p>This LCA refers to the small-scale village settlements and agricultural lands scattered in Ma Wan Chung, and to the southwest side of Yat Tung Estate and Mun Tung Estate. The majority of them comprise low-rise village houses in a cluster while some are a group of a few houses. As a result of human disturbance, mainly focused around the settled areas and extent of clearance for roads and parking, it is considered that the LCA has a Medium capacity to accept change. It has a rarity rating of Medium. The landscape quality is Medium. The overall sensitivity is rated as Medium.</p>						
LCA11	0.4	Low	Low	Regional	High	Medium	Low
	<p><u>Airport Landscape</u></p> <p>This LCA refers to the reclaimed landscape forming HKIA excluding the main road infrastructure on the south-eastern edge of the island. A relatively large proportion of open green space is provided, formed around the complex system of road viaducts, junctions and on verges. As this landscape is entirely formed on reclaimed land and incorporates major infrastructure and an airport, the capacity to accept change is considered to be High, and the rarity is considered as Low. The landscape contains some mature planting and formalised landscape spaces although these are minor in proportion when compared to the scale of airport development. The landscape quality is Low. The overall sensitivity is rated as Low.</p>						
LCA12	7.5	Medium	Low	Local	High	Medium	Medium
	<p><u>Institutional Landscape</u></p> <p>This LCA refers to the institutional land uses, and features includes North Lantau Hospital, the Caritas Charles Vath College and the YMCA of Hong Kong Christian College and ancillary outdoor sports facilities, and the land nearby. As a result of the built nature of this LCA, it has a High capacity to accept change, and Low rarity. The landscape quality is considered as Medium due to the amenity planting in the area. The overall sensitivity is rated as Medium.</p>						
LCA13	18.6	Medium	Low	Local	High	Low	Low
	<p><u>Residential Urban Landscape</u></p> <p>This LCA refers to the residential areas of Yat Tung Estate and Mun Tung Estate. It comprises many high-rise residential buildings and ancillary facilities such as shopping malls, carpark, and community centres. Some amenity landscape area can be found, e.g. ornamental planting, feature paving, sitting out area and green roofs. As this LCA has been heavily developed, it is considered to have a High capacity to accept change. Rarity rating is Low since it is quite typical a housing project in Hong Kong. The landscape contains some formalised landscape spaces which provide some landscape amenity. The landscape quality is considered as 'Medium'. The overall sensitivity is rated as Low.</p>						

10.5.6 Summary of Landscape Character Areas and their Sensitivity

10.5.6.1 LCAs with high sensitivity which are natural components includes LCA3 Intertidal Coast Landscape, LCA4 Coastal Upland and Hillside Landscape, LCA5 Settled Valley Landscape, and LCA6 Upland Hillside Landscape.

10.5.6.2 LCAs including LCA1 Inshore Water Landscape and LCA2 Strait Landscape are common and quite abundant in Hong Kong. They are in medium sensitivity. With the human disturbance, LCA10 Urban Peripheral Village and Rural Fringe

Landscape, and LCA12 Institutional Landscape are less sensitive and of medium sensitivity.

10.5.6.3 The remaining LCAs including LCA7 Reclamation/ Ongoing Major Development Landscape, LCA8 Transportation Corridor Landscape, LCA9 Mixed Modern Comprehensive Urban Development Landscape, LCA11 Airport Landscape and LCA13 Residential Urban Landscape, which are regarded as artificial development landscape, are of low sensitivity.

10.5.7 Review of the Broad-Brush Tree and Vegetation Survey Records

10.5.7.1 A broad-brush tree survey and vegetation survey as shown in **Appendix 10.2** was conducted by the Project Proponent within the proposed works sites and work areas between April and July 2020. The survey methodologies were in accordance with the requirements in LAO PN 2/2020, DEVB TCW No. 4/2020 – Tree Preservation and DEVB TCW No. 5/2020 – Registration of Old and Valuable Trees, and Guidelines for their Preservation.

10.5.7.2 According to the board tree and vegetation survey results, about 3,200 nos. of existing trees are identified within the works sites/ works areas and none of these are Registered Old and Valuable Trees (OVTs), stonewall tree nor Trees of Particular Interest (TPI). However, 17 nos. of protected species (under The Forests and Countryside Ordinance (Cap.96)) are recorded (including 12 *Lagerstroemia speciosa* 大花紫薇 and 5 *Magnolia denudata* 玉蘭) during the survey. The overall health conditions and the maturity of the surveyed existing trees are rated as medium. Dominant tree species include *Litchi chinensis* 荔枝, *Schima superba* 木荷, *Livistona chinensis* 蒲葵, *Casuarina equisetifolia* 木麻黃 and *Ficus microcarpa*. 細葉榕. Most of the surveyed existing trees are found within the Agricultural Land, Urban Development and Road, Urban Infrastructure and Major Transport Corridor.

10.6 Visual Baseline Study

10.6.1 Visual Baseline Condition

10.6.1.1 The visual assessment area is defined by the VE which is the area that any part of the proposed project can be seen from, and is generally the viewshed formed by natural/ manmade features such as ridgelines, built form or areas of woodland/ large trees. The VE may contain areas, which are fully visible, partly visible and non-visible from the project.

10.6.1.2 The VE includes the areas of North Lantau, HKIA and Chek Lap Kok. The proposed at-ground structures with its vent shaft facilities are mainly erected within both existing and future urban areas, which include Yat Tung Estate, artificial slopes along Shun Tung Road, and future TCNTE. Hence, the proposed work areas are fairly enclosed by prominent foothill in close proximity to the south, by the

inshore water immediately to the northwest, and by the existing Tung Chung Town and future TCNTE to the north.

10.6.2 Identification of VSRs

10.6.2.1 The selection of VSRs have considered the latest locations of at-ground structures including stations, station entrance, vent shaft structures, EAP/ EEP, etc. Among the VE, 20 potential VSRs are identified. The potential VSRs include residents at existing residential buildings nearby in Tung Chung Town and future residential buildings in TCNTE (including Ying Tung Estate, Coastal Skyline, Caribbean Square, Century Link, The Visionary, Tung Chung Crescent, Fu Tung Estate, Yu Tai Court, Ma Wan New Village, Yat Tung Estate and Mun Tung Estate); workers on HKIA; recreational users of public footpaths and trails within Scenic Hill and Lantau North Country Park, and Tung Chung Fort; travellers along NLH and Yu Tung Road. The scope of VE and locations of VSRs are indicated in **Figure 10.7**.

10.6.3 Sensitivity of VSRs

10.6.3.1 The assessment of sensitivity is based on the quality and extent of the existing view. The factors affecting the sensitivity of receivers for evaluation of visual impacts include the following:

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

10.6.3.2 The described and sensitivity of each VSRs are summarised in **Table 10.6**. Representative photographs of each VSR are shown in **Figure 10.8a to Figure 10.8f**.

Table 10.6 Description & Sensitivity of VSRs

VSR Code	Type of VSR (Residential/ Recreational/ Occupational/ Transportation)	Approx. Closest Viewing Distance to Project (m)	No. of VSRs (Few/ Medium/ Many)	Quality of View (Good/ Fair/ Poor)	Availability of Alternative View (Yes/ No)	Degree of Visibility (Glimpse/ Partial/ Full)	Duration of View (Short/ Medium/ Long)	Frequency of View (Rare/ Occasional/ Frequent)	Sensitivity (Low/ Medium/ High)
VSR1	Transportation	110	Many	Good	Yes	Glimpse	Short	Occasional	Low
<p><u>North Lantau Highway</u> This VSR represents the passengers and drivers on NLH, TCL and AEL. The existing view towards west is characterised by the major transportation corridor with heavy traffic and screening tree planting along both sides of the road in a close view. The hillside of Por Kai Shan and Tung Chung Town and the open sky view form the background to the view. With a high speed passing the major transportation corridor, the receivers would just have a glimpse and short duration of view. The overall sensitivity is rated as Low.</p>									
VSR2	Residential	185	Many	Fair	Yes	Partial	Long	Frequent	High
<p><u>Planned Tung Chung New Town Extension</u> This VSR is located at the existing reclamation area of TCNTE, which is about 185m from the proposed TCE Station and TCL realignment. This VSR represents the future residents and visitors carrying out recreational activities at planned TCNTE. The existing view to the proposed TCE Station is characterised by the existing TCL and NLH with tree planting along the railways in the foreground, and Por Kai Shan in the background. Given residential VSR would have a long duration of view and pay more attention on any visual of change, the overall sensitivity is rated as High.</p>									
VSR3	Residential	125	Many	Good	Yes	Partial	Long	Frequent	High
<p><u>Ying Tung Estate</u> The VSR represents the residents at Ying Tung Estate which is located at the west of the TCE Station. The existing view towards the proposed station is dominated by reclamation land of TCNTC and the Lantau North Country Park form the backdrop. Given residential VSR would have a long duration of view and pay more attention on any visual of change, the overall sensitivity is rated as High.</p>									
VSR4	Residential	135	Many	Good	Yes	Glimpse	Long	Frequent	High
<p><u>The Visionary</u> This VSR represents the residents at the Visionary and next to Ying Tung Estate. The existing view towards the temporary works area, TCE Station and TCL realignment is dominated by Ying Tung Estate in the foreground. The residential VSRs would have a long duration of view and pay more attention to any visual of change, the overall sensitivity is also rated as High.</p>									
VSR5	Residential	180	Many	Fair	Yes	Glimpse	Long	Frequent	High

VSR Code	Type of VSR (Residential/ Recreational/ Occupational/ Transportation)	Approx. Closest Viewing Distance to Project (m)	No. of VSRs (Few/ Medium/ Many)	Quality of View (Good/ Fair/ Poor)	Availability of Alternative View (Yes/ No)	Degree of Visibility (Glimpse/ Partial/ Full)	Duration of View (Short/ Medium/ Long)	Frequency of View (Rare/ Occasional/ Frequent)	Sensitivity (Low/ Medium/ High)
	<p><u>Caribbean Coast</u></p> <p>This VSR represents the residents at Caribbean Coast which is next to the Visionary. VSR has a distant view towards the proposed TCE Station and works area. The existing view towards the proposed station is characterised by the traction substation and NLH in the foreground and the Lantau North Country Park forms the background to the view. Given residential VSRs would have a long duration of view and pay more attention on any visual of change, the overall sensitivity is rated as High.</p>								
VSR6	Occupational/ Recreational	65	Medium	Good	Yes	Full	Medium	Occasional	Medium
	<p><u>Sheraton Hong Kong Tung Chung Hotel</u></p> <p>The VSR represents the hotel staffs and visitors at Sheraton Hong Kong Tung Chung Hotel and is located at the east of the proposed temporary barging point. Some on-going construction works form the foreground, while the open sea of Tung Chung Bay and HKIA can be seen in the back. Due to the occupational/ recreational VSR would only have medium duration. The overall sensitivity is rated as Medium.</p>								
VSR7	Residential	155	Many	Fair	Yes	Partial	Long	Frequent	High
	<p><u>Coastal Skyline</u></p> <p>This VSR represents the residents at Coastal Skyline along Tung Chung Waterfront Road. The proposed temporary barging point is located at north of this VSR in the foreground, and with a panoramic view in the background of open sea and HKIA. Given residential VSR would have a long duration of view and pay more attention on any visual of change, the overall sensitivity is rated as High.</p>								
VSR8	Occupational	880	Few	Good	Yes	Partial	Medium	Rare	Medium
	<p><u>Chek Lap Kok Airport Island</u></p> <p>This VSR represents the workers at the HKIA and is located on the south-eastern part of Chek Lap Kok. The existing view towards the proposed temporary barging point is characterised by the coastal water in the foreground and with the panoramic view in the background of Tung Chung Town and Por Kai Shan. Given the occupational VSR would take the existing view as a secondary view and experience medium duration of view. The overall sensitivity is rated as Medium.</p>								
VSR9	Recreational	670	Medium	Good	Yes	Partial	Short	Occasional	Medium
	<p><u>Scenic Hill</u></p> <p>This VSR represents the hikers at Scenic Hill and is located at the hiking trail of Scenic Hill viewing towards the Tung Chung Bay. The existing view is characterised by the Tung Chung Bay and Chek Lap Kok South Road in the foreground whilst residential building clusters (e.g. Tung Chung Crescent and Yu Tung Estate) with the foothill near Ma Wan Chung form the backdrop. Although this VSR would only have short duration of view, but it would have a good quality of view and enjoy the good environs, therefore, the overall sensitivity is rated as Medium.</p>								

VSR Code	Type of VSR (Residential/ Recreational/ Occupational/ Transportation)	Approx. Closest Viewing Distance to Project (m)	No. of VSRs (Few/ Medium/ Many)	Quality of View (Good/ Fair/ Poor)	Availability of Alternative View (Yes/ No)	Degree of Visibility (Glimpse/ Partial/ Full)	Duration of View (Short/ Medium/ Long)	Frequency of View (Rare/ Occasional/ Frequent)	Sensitivity (Low/ Medium/ High)
VSR10	Residential	60	Many	Good	Yes	Full	Long	Frequent	High
<p><u>Tung Chung Crescent</u> This VSR represents the residents at Tung Chung Crescent, facing towards the foothill near Ma Wan Chung. The existing views towards the proposed EAP/ EEP is characterised by the natural foothill. Given residential VSR would have a long duration of view and pay more attention on any visual of change, the overall sensitivity is rated as High.</p>									
VSR11	Residential	85	Many	Fair	Yes	Glimpse	Long	Frequent	High
<p><u>Fu Tung Estate</u> This VSR represents the residents at Fu Tung Estate, facing towards the foothill near Ma Wan Chung, and have a similar view of VSR10 Tung Chung Crescent. Given residential VSR would have a long duration of view and pay more attention on any visual of change, the overall sensitivity is rated as High.</p>									
VSR12	Recreational	710	Medium	Good	Yes	Partial	Short	Occasional	Medium
<p><u>Lantau North Country Park</u> This VSR represents the hikers on Por Kai Shan and is located in the designated public footpaths and trails within the Lantau North (Extension) Country Park. The existing view towards north is characterised by the on-going reclamation area. The HKIA, Hong Kong Boundary Crossing Facilities (HKBCF) island and surrounding open seascape form the background to this view. While this VSR would only have short duration of view, it would have a good quality of view and enjoy the good environs. The overall sensitivity is rated as Medium.</p>									
VSR13	Residential	120	Many	Fair	Yes	Partial	Long	Frequent	High
<p><u>Yu Tai Court</u> This VSR represents the residents at Yu Tai Court near Tung Chung Road. The existing view towards the proposed temporary works area is characterised by mature plantation and low-rise residential village buildings in a close view. And the natural foothills form the background to this view. Given residential VSR would have a long duration of view and pay more attention on any visual of change, the overall sensitivity is rated as High.</p>									
VSR 14	Residential	80	Many	Fair	Yes	Partial	Long	Frequent	High
<p><u>Ma Wan New Village</u> This VSR represents the residents at Ma Wan New Village near Tung Chung Road, and have a similar view of VSR13 Yu Tai Court. Given residential VSR would have a long duration of view and pay more attention on any visual of change, the overall sensitivity is rated as High.</p>									
VSR15	Transportation	2	Medium	Fair	Yes	Glimpse	Short	Occasional	Low

VSR Code	Type of VSR (Residential/ Recreational/ Occupational/ Transportation)	Approx. Closest Viewing Distance to Project (m)	No. of VSRs (Few/ Medium/ Many)	Quality of View (Good/ Fair/ Poor)	Availability of Alternative View (Yes/ No)	Degree of Visibility (Glimpse/ Partial/ Full)	Duration of View (Short/ Medium/ Long)	Frequency of View (Rare/ Occasional/ Frequent)	Sensitivity (Low/ Medium/ High)
	<p><u>Yu Tung Road</u></p> <p>This VSR represents the passengers and drivers through Yu Tung Road. The existing view towards the TCW Station is characterised by the traffic roads, footbridges, and roadside amenity planting along the roads. With a high speed passing this traffic road, the receiver would experience a glimpse of the proposed station and short duration of view. The overall sensitivity is rated as Low.</p>								
VSR16	Residential	10	Many	Good	Yes	Full	Long	Frequent	High
	<p><u>Yat Tung Estate</u></p> <p>This VSR represents the residents at Yat Tung Estate which is located near Yu Tung Road. The existing view towards west is characterised by Wong Lung Hang nullah at the foreground and the Airport Island in the background. Given residential VSR would have a long duration of view and pay more attention on any visual of change, the overall sensitivity is rated as High.</p>								
VSR17	Recreational	150	Medium	Fair	Yes	Glimpse	Medium	Occasional	Medium
	<p><u>Tung Chung Fort</u></p> <p>This VSR represents the visitors of Tung Chung Fort which is located at Tung Chung Fort within Wong Ka Wai Village. The existing view towards northwest is characterized by heritage structures of Tung Chung Fort, low-rise village buildings and scattered vegetation in a close view. The high-rise buildings of Yat Tung Estate form the background to this view. The VSR would take the existing view as a secondary view and experience short duration of view. the overall sensitivity is therefore rated as Medium.</p>								
VSR18	Residential	85	Many	Fair	Yes	Partial	Long	Frequent	High
	<p><u>Mun Tung Estate</u></p> <p>The VSR represents the residents of Mun Tung Estate which is located at Chun Mun Road. The existing view towards north is characterised by the Wong Lung Hang nullah estuary and Yat Tung Estate in the foreground, and Tung Chung Bay and HKIA form the background to this view. Given residential VSR would have a long duration of view and pay more attention on any visual of change, the overall sensitivity is rated as High.</p>								
VSR19	Residential	75	Many	Fair	Yes	Partial	Long	Frequent	High
	<p><u>Ha Ling Pei Village</u></p> <p>The VSR represents the residents of Ha Ling Pei Village which is located along Tung Chung Road. The existing view towards north is facing to the nullah, roadside planting and Yat Tung Estate. Given residential VSR would have a long duration of view and pay more attention on any visual of change, the overall sensitivity is rated as High.</p>								
VSR20	Residential	250	Many	Fair	Yes	Partial	Long	Frequent	High

VSR Code	Type of VSR (Residential/ Recreational/ Occupational/ Transportation)	Approx. Closest Viewing Distance to Project (m)	No. of VSRS (Few/ Medium/ Many)	Quality of View (Good/ Fair/ Poor)	Availability of Alternative View (Yes/ No)	Degree of Visibility (Glimpse/ Partial/ Full)	Duration of View (Short/ Medium/ Long)	Frequency of View (Rare/ Occasional/ Frequent)	Sensitivity (Low/ Medium/ High)
	<p><u>Ma Wan Chun Village</u></p> <p>The VSR represents the residents of Ma Wan Chun Village which is located near the Tung Chung Ma Wan Pier. The existing view towards north is characterised by a cluster of village houses with the small pier in the foreground, some high-rise residential buildings are visible from the background to this view. Given residential VSR would have a long duration of view and pay more attention on any visual of change, the overall sensitivity is rated as High.</p>								
VSR21	Residential	175	Medium	Fair	Yes	Partial	Medium	Occasional	Medium
	<p><u>Future Tung Chung West Promenade</u></p> <p>The VSR represents the visitors passing by the area. This VSR locates at an open area surrounded by vegetations and some temporary structures. The existing view towards south is characterised by some high-rise residential buildings of Yat Tung Estate. Given the visitors may not have a long duration of view at this spot, the overall sensitivity is rated as Medium.</p>								
VSR22	Transportation	285	Medium	Fair	Yes	Glimpse	Short	Occasional	Low
	<p><u>Tung Chung Line & Airport Express Line</u></p> <p>The VSR represents the passengers on the Tung Chung Line and Airport Express Line of MTR. The existing view towards the TCE Station is characterised by the traffic roads, roadside amenity planting along the roads and open sea view. With a high-speed passing this railway, the receiver would experience a glimpse of the proposed station and short duration of view. The overall sensitivity is rated as Low.</p>								

10.6.4 Summary of VSRs and their Sensitivity

10.6.4.1 Given residential VSRs would have a long duration of view and pay more attention on any visual of change, included VSR2 Planned Tung Chung New Town Extension, VSR3 Ying Tung Estate, VSR4 The Visionary, VSR5 Caribbean Coast, VSR7 Coastal Skyline, VSR10 Tung Chung Crescent, VSR11 Fu Tung Estate, VSR13 Yu Tai Court, VSR14 Ma Wan New Village, VSR16 Yat Tung Estate, VSR18 Mun Tung Estate, VSR 19 Ha Ling Pei Village and VSR 20 Ma Wan Chun Village. Hence, the sensitivities are rated as high.

10.6.4.2 VSR6 Sheraton Hong Kong Tung Chung Hotel, VSR8 Chek Lap Kok Airport Island, VSR17 Tung Chung Fort and VSR 21 Future Tung Chung West Promenade experience with good/ fair quality of view. However, given the VSRs would only have short to medium duration of view, the VSRs would therefore have medium sensitivities on any visual changes.

10.6.4.3 VSR9 Scenic Hill, VSR12 Lantau North Country Park represent the hikers which would experience good quality of view. However, given the VSRs would only have short duration of view. Hence, the sensitivities are considered as medium.

10.6.4.4 VSR1 North Lantau Highway, VSR15 Yu Tung Road and VSR 22 Tung Chung Line & Airport Express represent the transient reciters with short duration of view, the overall sensitivities are rated as low.

10.7 Landscape and Visual Impact Assessment before Mitigation

10.7.1 Aims of Review

10.7.1.1 A review of the existing and planned development framework for the proposed development and context has been conducted to:

- Assist with identification of existing landscape resources and potentially sensitive receivers;
- Highlight potential issues for neighbouring planned land uses;
- Optimise the compatibility of the development with the surrounding land uses.

10.7.2 Sources of Landscape and Visual Impact

10.7.2.1 As mentioned in **Section 10.2.5**, there are number of construction and temporary works within the project boundary. Some landscape and visual impacts would therefore be generated.

10.7.2.2 During the construction stage, potential landscape visual impacts will be caused by the following:

- **Construction Works** – construction of the at-ground structures, such as realignment of the existing at-grade TCL section from Tuen Mun Chek Lap Kok connection point to south of Ying Tung Estate, TCE Station, TCW Station, station entrance, vent shaft structures, EAP/ EEP, would generate landscape and visual impacts due to the appearance of construction activities and loss of vegetation cover;
- **Temporary Works** – temporary works including site offices, boundary fencing/ hoarding, parking areas, storage of construction equipment and mechanical plant, as well as operation of barging point, would generate landscape and visual impacts as a result of these operation intruding into existing view and generally low aesthetical value of these types of structures; and
- **Night-time Lighting** – night-time lighting such as security floodlights of the construction site would cause adverse visual impacts.

10.7.2.3 During operational phase, the potential residual landscape and visual impacts would be related to the permanent loss of landscape resources and above-ground structures:

- **Operation of TCE Station and TCW Station with Associated Facilities** – operation of both stations with the associated facilities such as EAP/EEP buildings, station entrances, vent shaft structures, would generate visual impacts due to the visibility of new structures; and
- **Residual Impacts** – residual impacts from loss of trees, vegetation and recreational facilities during the construction phase would generate landscape impacts and visual impacts.

10.7.3 Magnitude of Change to Landscape Resources and Landscape Character Areas

10.7.3.1 The magnitude of change on LRs and LCAs are presented in Table 10.7 and Table 10.8.

Table 10.7 Magnitude of Change on LRs

ID Code	LRs	Physical Extent of the Impact (Small/ Medium/ Large) ^[3]	Compatibility with Surrounding Landscape (Good/ Fair/ Poor)		Duration of Impact (Temporary/ Permanent)		Reversibility of Change (Reversible/ Irreversible)	Magnitude of Change (Large/ Intermediate/ Small/ Negligible)	
			CON ^[1]	OP ^[2]	CON	OP		CON	OP
LR1	Secondary Woodland	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
LR2	Shrubland & Grassland	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
LR3	Plantation	Small (1.26 ha, <5%)	Poor	Poor	Temporary	Permanent	Irreversible	Small	Small
	It is anticipated that the construction work of the EAP/EEP would involve site clearance and earthworks within this LR, these works would induce temporary and irreversible landscape impact. Therefore, the compatibility is considered to be poor in construction and operational phase. Given only small portions of LR3 will be affected, the magnitude of change of the LRs are rated as ' Small ' during both construction and operational stages.								
LR4	Fung Shui Woodland	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
LR5	Agricultural Land	Medium (1.79 ha, 5.5%)	Poor	Poor	Temporary	Permanent	Irreversible	Large	Large
	During construction phase, potential landscape impacts to the LR would be arisen from the site formation works for the proposed vent shaft structures and TCW Station, which would be induce temporary and reversible impact to the existing agricultural land. Given to its medium physical extent of impact and the natural landscape, the magnitude of change is considered to be ' Large ' during both construction and operational stage.								
LR6	Mangrove	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
LR7	Reedbed	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
LR8	Coastal Water	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
LR9	Transitional Water	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
LR10a	Natural Watercourse	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
LR10b	Channelised Watercourse	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

ID Code	LRs	Physical Extent of the Impact (Small/ Medium/ Large) ^[3]	Compatibility with Surrounding Landscape (Good/ Fair/ Poor)		Duration of Impact (Temporary/ Permanent)		Reversibility of Change (Reversible/ Irreversible)	Magnitude of Change (Large/ Intermediate/ Small/ Negligible)	
			CON ^[1]	OP ^[2]	CON	OP		CON	OP
LR11a	Mudflat	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
LR11b	Rocky Coastline	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
LR12	Artificial Seawall	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
LR13a	Major Transport Corridor	Large (7.96 ha, 22%)	Fair	Fair	Temporary	Permanent	Irreversible	Intermediate	Small
	The construction of the proposed TCL realignment would involve breaking out hard surface and earthworks near this LR, these works would induce temporary and irreversible landscape impact, hence the magnitude of change is considered as “Intermediate” during construction stage. Consider the man-made nature of this LR and the excavated area will be reinstated after the construction. Thus, the magnitude of change is considered as ‘Small’ during operation stage.								
LR13b	Road & Urban Infrastructure	Medium (4.39 ha, 11%)	Fair	Fair	Temporary	N/A	Reversible	Small	Negligible
	Similar to the discussion in LR13a, the construction works of TCW station would induce temporary and reversible landscape impact, the magnitude of change is considered as “Small” during construction stage. Consider the works would be compatible with the existing landscape and the excavated area will be reinstated after the construction. Thus, the magnitude of change is considered as ‘Negligible’ during operation stage.								
LR14	Village Type Development	Small (0.25 ha, <5%)	Fair	N/A	Temporary	N/A	Reversible	Small	N/A
	Similar to the discussion in LR13b, the construction of TCW station would induce temporary and reversible landscape impact to this LR during construction, the magnitude of change is considered as ‘Small’ during construction stage.								
LR15	Urbanised Development	Small (5.50 ha, <5%)	Fair	Fair	Temporary	Permanent	Irreversible	Small	Small
	The construction of TCW station and barging facilities would induce temporary and irreversible landscape impact to this LR. Given to its relatively small works extent and the works are compatible with the surrounding urban landscape, the magnitude of change is considered as ‘Small’ during construction and operational stage.								
LR16	Ongoing Reclamation Area	Medium (5.48 ha, 6%)	Fair	Fair	Temporary	Permanent	Irreversible	Negligible	Small
	The proposed TCE Station will be erected at the existing reclaimed land, it is considered the works are compatible with the surrounding landscape as the adjacent reclaimed land is under construction. The magnitude of change during construction is regarded to be ‘Negligible’ . During operation, the landscape impact is								

ID Code	LRs	Physical Extent of the Impact (Small/ Medium/ Large) ^[3]	Compatibility with Surrounding Landscape (Good/ Fair/ Poor)		Duration of Impact (Temporary/ Permanent)		Reversibility of Change (Reversible/ Irreversible)	Magnitude of Change (Large/ Intermediate/ Small/ Negligible)	
			CON ^[1]	OP ^[2]	CON	OP		CON	OP
	considered to be permanent and the change is irreversible. Given the low sensitivity of this area, the magnitude of change is regarded to be ' Small ' during operation stage.								

Note:

[1] CON – Construction Phase.

[2] OP – Operational Phase

[3] Large physical extent of impact – >20% of total LR/ LCA area within 500m assessment area.

Medium physical extent of impact – 5 to 20% of total LR/ LCA area within 500m assessment area.

Small physical extent of impact – <5% of total LR/ LCA area within 500m assessment area.

[4] N/A – As the Project Site will not overlap with the LR/ LCA, so will not be affected.

Table 10.8 Magnitude of Change on LCAs

ID Code	LCAs	Physical Extent of the Impact (Small/ Medium/ Large) ^[3]	Compatibility with Surrounding Landscape (Good/ Fair/ Poor)		Duration of Impact (Temporary/ Permanent)		Reversibility of Change (Reversible/ Irreversible)	Magnitude of Change (Large/ Intermediate/ Small/ Negligible)	
			CON ^[1]	OP ^[2]	CON ^[1]	OP ^[2]		CON ^[1]	OP ^[2]
LCA1	Inshore Water Landscape	N/A ^[4]	N/A	N/A	N/A	N/A	N/A	N/A	N/A
LCA2	Strait Landscape	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
LCA3	Inter-tidal Coast Landscape	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
LCA4	Coastal Upland and Hillside Landscape	Small (0.38 ha, <5%)	Poor	Poor	Temporary	Permanent	Irreversible	Small	Small
	LCA4 Coastal Upland and Hillside Landscape is considered as high sensitivity due to its natural landscape. Given to its relatively small works extent, there will be no significant changes on this LCA after the construction of the proposed development, therefore the magnitude of change is rated as ' Small ' in construction stage and operational stage.								
LCA5	Settled Valley Landscape	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
LCA6	Upland Hillside Landscape	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

ID Code	LCAs	Physical Extent of the Impact (Small/ Medium/ Large) ^[3]	Compatibility with Surrounding Landscape (Good/ Fair/ Poor)		Duration of Impact (Temporary/ Permanent)		Reversibility of Change (Reversible/ Irreversible)	Magnitude of Change (Large/ Intermediate/ Small/ Negligible)	
			CON ^[1]	OP ^[2]	CON ^[1]	OP ^[2]		CON ^[1]	OP ^[2]
LCA7	Reclamation / Ongoing Major Development Landscape	Medium (12.67ha, 9.4%)	Fair	Fair	Temporary	Permanent	Irreversible	Negligible	Small
	The proposed TCE station with several temporary work areas (included barging point) will be erected at the existing reclaimed land. Consider it is fully compatible with the surrounding landscape as the adjacent reclaimed land is under construction, and hence the magnitude of change is regarded to be ' <u>Negligible</u> '. During operation, it is considered the proposed TCE station will be compatible with the future TCNTE development, the magnitude of change is regarded to be ' <u>Small</u> ' in the operational stage.								
LCA8	Transportation Corridor Landscape	Medium (6.29 ha, 11%)	Fair	Fair	Temporary	Permanent	Irreversible	Intermediate	Small
	Realignment of the existing at grade TCL section will be erected at the existing Tung Chung Line, given the medium extent of the impact, the existing landscape area would be affected by the construction works, hence the magnitude of change is considered as " <u>Intermediate</u> " during construction stage. However, the proposed realignment is considered to be compatible with the existing railway, there will be no significant changes on this LCA after the construction, the magnitude of change is considered to be ' <u>Small</u> ' during operation stage.								
LCA9	Mixed Modern Comprehensive Urban Development Landscape	Small (4.25 ha, <5%)	Fair	Fair	Temporary	Permanent	Irreversible	Small	Small
	The proposed TCW station and some temporary works areas are proposed within this LCA. As the majority of the LCA will be preserved, the overall compatibility with surrounding landscape is fair. The magnitude of change is therefore considered to be ' <u>Small</u> ' in construction stage and operational stage.								
LCA10	Urban Peripheral Village and Rural Fringe Landscape	Small (2.51 ha, <5%)	Fair	N/A	Temporary	Permanent	Irreversible	Small	Small
	Similar to the discussion in LCA9, the construction of TCW station and temporary works would induce landscape impact to this LCA, the magnitude of change is considered as ' <u>Small</u> ' during both stages.								
LCA11	Airport Landscape	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
LCA12	Institutional Landscape	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
LCA13	Residential Urban Landscape	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Note:

[1] CON – Construction Phase.

[2] OP – Operational Phase

- [3] Large physical extent of impact – >20% of total LR/ LCA area within 500m assessment area.
Medium physical extent of impact – 5 to 20% of total LR/ LCA area within 500m assessment area.
Small physical extent of impact – <5% of total LR/ LCA area within 500m assessment area.
- [4] N/A – As the footprint Project will not overlap with the LR/ LCA, so will not be affected.

10.7.4 Impacts on Tree Identified after Board Tree Survey

10.7.4.1 The broad tree and vegetation survey have identified 17 nos. of protected species are recorded (12 *Lagerstroemia speciosa* 大花紫薇, and 5 *Magnolia denudata* 玉蘭) during the survey. 12 nos. of *Lagerstroemia speciosa* 大花紫薇 can be found at the roadside amenity planters near Ping Yat Estate and Yu Tung Road; and 5 nos. of *Magnolia denudata* 玉蘭 are recorded along Shun Tung Road. Based on the development layout, there is no tree of conservation status or particular interest will be affected by the proposed development.

10.7.4.2 Based on the development layout and the distribution of the existing trees, this preliminary tree impact assessment suggests that about 30% of the trees within the tree assessment boundary could be preserved. Regarding to the development layout of railway line extension, most of the tree preservation are within the LR of Secondary Woodland in TCW. Almost 70% of trees within the development boundary are affected under the LRs of Agricultural Land (LR5), Plantation (LR3), Urbanised Development (LR15) and Road and Infrastructure (LR13b). A large scale of Agricultural land at TCW will be affected by sites designated for the future railway station.

10.7.4.3 A summary of the breakdown of trees that would need to be felled / transplanted is given in **Table 10.9** below. The location of different construction areas is shown in **Figure 10.9**.

Table 10.9 Summary of breakdown of felled/ transplanted tree by different construction areas

Works Areas / Work Sites	No of Trees Affected (approx.)	Remarks	Affected LRs and LCA
TCE Station	0	N.A.	LR16; LCA7
At-grade Track	0	N.A.	LR13a; LCA8
Barging Facility	10 (Fell & compensate)	Species include <i>Acacia auriculiformis</i> 耳果相思, <i>Ficus virens</i> 黃葛樹, <i>Leucaena leucocephala</i> 銀合歡	LR15 (Approx. 10 nos.); LCA7 (Approx. 10 nos.)
TBM Launching/ Retrieval Shaft Near Tung Chung Crescent	150 (Fell & compensate)	Species include but not limited to <i>Delonix regia</i> 鳳凰木, <i>Ficus macrocarpa</i> 細葉榕, <i>Khaya Senegalensis</i> 非洲棟 and <i>Roystonea regia</i> 大王椰子 etc.	LR13b (Approx. 20 nos.); LR15 (Approx. 130 nos.); LCA9 (Approx. 150 nos.)
EAP / EEP	90 (Fell & compensate)	All these trees are within an artificial slope west of Shun Tung Road. Species include but not limited to <i>Albizia</i>	LR3 (Approx. 90 nos.); LCA9 (Approx. 90 nos.)

Works Areas / Work Sites	No of Trees Affected (approx.)	Remarks	Affected LRs and LCA
		<i>lebbeck</i> 大葉合歡, <i>Eucalyptus robusta</i> 大葉桉 and <i>Casuarina equisetifolia</i> 木麻黃 etc.	
TCW Station	1,600 (Fell & compensate)	Most of these are fruit trees and are within orchids. Species include but not limited to <i>Cinnamomum burmannii</i> 陰香, <i>Litchi chinensis</i> 荔枝, <i>Macaranga tanarius var. tomentosa</i> 血桐, <i>Litchi chinensis</i> 荔枝 and <i>Clausena lansium</i> 黃皮 etc.	LR5 (Approx. 1410 nos.); LR15(Approx. 190 nos.); LCA7 (Approx. 190 nos.); LCA10 (Approx. 1410 nos.)
TTM etc along Shun Tung Road	70 (Fell & compensate) 30 (Transplant)	All these are road-side trees. Species include but not limited to <i>Cinnamomum camphora</i> 樟樹, <i>Delonix regia</i> 鳳凰木, <i>Elaeocarpus decipiens</i> 杜英 and <i>Firmiana simplex</i> 梧桐 etc.	LR13b (Approx. 70 nos.) & LR15 (Approx. 30 nos.); LCA9 (Approx 100 nos.)
TTM etc along Yu Tung Road	180 (Fell & compensate) 140 (Transplant)	All these are road-side trees. Species include but not limited to <i>Acacia mangium</i> 大葉相思, <i>Albizia lebbeck</i> 大葉合歡, <i>Ficus microcarpa</i> 細葉榕, <i>Litchi chinensis</i> 荔枝 and <i>Phoenix hanceana</i> 刺葵 etc.	LR3(Approx. 130 nos.); LR15 (Approx. 190 nos.); LCA7 (Approx. 130 nos.); LCA10 (Approx. 190 nos.)

10.7.4.4 The following **Table 10.10** presents a summary of the breakdown of trees that would need to be fell and compensated / transplant by the entire Project.

Table 10.10 Summary of breakdown of felled/ transplanted tree by the entire Project

Item	Qty, Approx				Total
	Fruit Trees	Road-Side Trees	Trees on Artificial Slope	Others*	
Tree to be felled & compensated	1,410	250	90	350	2,100
Tree to be transplanted	Nil	170	Nil	0	170
Total	1,410	430	90	350	2,270

Note:

* Others refer to those in the barging facility, TBM launching/ retrieval shaft and non-fruit trees at the TCW Station.

10.7.4.5 A detailed Tree Felling Application process will be carried out at a later detail design stage, to finalise proposed treatment to trees (to be felled, transplanted or retained) and to allocate compensatory planting locations such as available open space, parks and streetscape in compliance with LAO PN 2/2020 and DEVB TC(W) 4/2020 Tree Preservation.

10.7.5 Significance of Impact on Landscape Resources

10.7.5.1 The potential significance of landscape impacts during the construction and operational phases before mitigation is provide in **Table 10.11** below.

Table 10.11 Significance of impacts on LRs

ID Code	LRs	LR Sensitivity (High/ Medium/ Low)	Magnitude of Change (Large/ Intermediate/ Small/ Negligible) ^[3]		Impact Significance Before Mitigation (Substantial/ Moderate/ Slight/ Insignificant) ^[3]	
			CON ^[1]	OP ^[2]	CON ^[1]	OP ^[2]
LR1	Secondary Woodland	High	N/A	N/A	N/A	N/A
LR2	Shrubland & Grassland	Medium	N/A	N/A	N/A	N/A
LR3	Plantation	Medium	Small	Small	Moderate	Moderate
LR4	Fung Shui Woodland	High	N/A	N/A	N/A	N/A
LR5	Agricultural Land	Medium	Large	Large	Moderate / Substantial	Moderate / Substantial
LR6	Mangrove	High	N/A	N/A	N/A	N/A
LR7	Reedbed	High	N/A	N/A	N/A	N/A
LR8	Coastal Water	Medium	N/A	N/A	N/A	N/A
LR9	Transitional Water	High	N/A	N/A	N/A	N/A
LR10a	Natural Watercourse	High	N/A	N/A	N/A	N/A
LR10b	Channelised Watercourse	Low	N/A	N/A	N/A	N/A
LR11a	Mudflat	High	N/A	N/A	N/A	N/A

ID Code	LRs	LR Sensitivity (High/Medium/Low)	Magnitude of Change (Large/ Intermediate/ Small/ Negligible) ^[3]		Impact Significance Before Mitigation (Substantial/ Moderate/ Slight/ Insignificant) ^[3]	
			CON ^[1]	OP ^[2]	CON ^[1]	OP ^[2]
LR11b	Rocky Coastline	High	N/A	N/A	N/A	N/A
LR12	Artificial Seawall	Low	N/A	N/A	N/A	N/A
LR13a	Major Transport Corridor	Low	Intermediate	Small	Moderate	Slight
LR13b	Road & Urban Infrastructure	Low	Small	Negligible	Slight	Insignificant
LR14	Village Type Development	Medium	Small	N/A	Moderate	N/A
LR15	Urbanised Development	Low	Small	Small	Slight	Slight
LR16	Ongoing Reclamation Area	Low	Negligible	Small	Insignificant	Slight

Note:

[1] CON – Construction Phase.

[2] OP – Operational Phase

[3] N/A – As the Project Site will not overlap with the LR/ LCA, so will not be affected.

10.7.6 Summary of Significance of Impacts on Landscape Resources

10.7.6.1 In summary, no LRs with high sensitivity will be in conflict with any proposed work areas.

10.7.6.2 Potential landscape impacts to the LR5 would be arisen from the site formation works for the proposed vent shaft structures and TCW Station, which would be induce temporary and reversible impact to the existing agricultural land. Given to its medium physical extent of impact and its medium sensitivity, the magnitude of change is considered to be **Large** during both construction and operational stage. Therefore, this LR will experience **Moderate/ Substantial** adverse impacts for both stages.

10.7.6.3 Small portions of LR3 Plantation will be in direct conflict with the EAP/EEP. Given only small portions of LR3 will be affected, the magnitude of change of the LRs are rated as **Small** during both construction and operational stages. Since the proposed development will have poor compatibility with surrounding landscape with irreversible changes, LR3 are predicted to experience **Moderate** impacts during both stages.

10.7.6.4 Realignment of the existing at-grade TCL section will be erected at LR 13a Major Transport Corridor. As the proposed realignment works would induce temporary and irreversible landscape impact, hence the magnitude of change is considered as **Intermediate** during construction stage. Consider the man-made nature of this LR and the excavated area will be reinstated after the construction, the magnitude of change is considered to be **Small** during operation stage. Hence, this LR will

experience **Moderate** adverse impacts during construction stages and **Slight** impact during operation stages.

10.7.6.5 The proposed TCW station, with temporary works areas included barging point, will be fallen within LR15 Urbanised Development. As the majority of the LR will be preserved, the overall compatibility with surrounding landscape is fair. The magnitude of change is therefore considered to be **Small**. The LR will also experience **Slight** adverse impacts during both stages.

10.7.6.6 The proposed TCE Station will be erected at the existing reclaimed land LR16 Ongoing Reclamation Area. It is compatible with the surrounding landscape as the adjacent reclaimed land is for development as well during construction stages. The magnitude of change is regarded to be **Negligible**. After construction, the landscape impact is considered to be permanent and the change is irreversible. Due to the small proportion of the LR will be affected with the good compatibility, the magnitude of change is regarded to be **Small**. Hence, the LR is predicted to experience **Insignificant** adverse impact at construction and **Slight** impact after construction.

10.7.6.7 Several temporary works will be scattered within LR13b Road & Urban Infrastructure, and LR14 Village Type Development. The landscape impacts will be only caused before operation. For LR13b Road & Urban Infrastructure, given it is compatible with the surrounding landscape as the adjacent landscape, the magnitude of change is considered to be **Negligible**. For LR14 Village Type Development, as the overall sensitivity is rated as medium. And the magnitude of change is regarded to be **Small** given only a small portion will be affected. Hence, as different magnitude of changes, the LR13b and LR14 are predicted to experience **Insignificant** and **Moderate** impact respectively.

10.7.6.8 The remaining LRs will experience insignificant impacts, as the LRs will not be affected by the Project.

10.7.7 Significance of Impact on Landscape Character Areas

10.7.7.1 The potential significance of landscape impacts during the construction and operational phases before mitigation is provide in **Table 10.12** below.

Table 10.12 Significance of impacts on LCAs

ID Code	LCAs	LCA Sensitivity (High/Medium/Low)	Magnitude of Change (Large/ Intermediate/ Small/ Negligible) ^[3]		Impact Significance Before Mitigation (Substantial/ Moderate/ Slight/ Insignificant) ^[3]	
			CON ^[1]	OP ^[2]	CON ^[1]	OP ^[2]
LCA1	Inshore Water Landscape	Low	N/A ^[3]	N/A	N/A	N/A
LCA2	Strait Landscape	Medium	N/A	N/A	N/A	N/A

ID Code	LCAs	LCA Sensitivity (High/Medium/Low)	Magnitude of Change (Large/ Intermediate/ Small/ Negligible) [3]		Impact Significance Before Mitigation (Substantial/ Moderate/ Slight/ Insignificant) [3]	
			CON [1]	OP [2]	CON [1]	OP [2]
LCA3	Inter-tidal Coast Landscape	High	N/A	N/A	N/A	N/A
LCA4	Coastal Upland and Hillside Landscape	High	Small	Small	Moderate	Moderate
LCA5	Settled Valley Landscape	High	N/A	N/A	N/A	N/A
LCA6	Upland Hillside Landscape	High	N/A	N/A	N/A	N/A
LCA7	Reclamation / Ongoing Major Development Landscape	Low	Negligible	Small	Insignificant	Slight
LCA8	Transportation Corridor Landscape	Low	Intermediate	Small	Moderate	Slight
LCA9	Mixed Modern Comprehensive Urban Development Landscape	Low	Small	Small	Slight	Slight
LCA10	Urban Peripheral Village and Rural Fringe Landscape	Medium	Small	Small	Moderate	Moderate
LCA11	Airport Landscape	Low	N/A	N/A	N/A	N/A
LCA12	Institutional Landscape	Medium	N/A	N/A	N/A	N/A
LCA13	Residential Urban Landscape	Low	N/A	N/A	N/A	N/A

Note:

[1] CON – Construction Phase.

[2] OP – Operational Phase

[3] N/A – As the Project Site will not overlap with the LR/ LCA, so will not be affected.

10.7.8 Summary of Significance of Impacts on Landscape Character Plans

10.7.8.1 LCA4 Coastal Upland and Hillside Landscape is considered as high sensitivity due to the natural landscape. However, as the majority of the LCA will be preserved, the magnitude of change is therefore considered to be **Small**. The LCA will experience **Moderate** adverse impacts during both construction and operational phases.

10.7.8.2 Realignment of the existing at grade TCL section will be erected at LCA8 Transportation Corridor Landscape, the medium extent of the existing landscape area would be affected by the construction works, the magnitude of change is considered as **“Intermediate”** during construction stage. However, the proposed

realignment is considered to be compatible with the existing railway, there will be no significant changes on this LCA after the construction, the magnitude of change is considered to be '**Small**' during operation stage. Hence, the LCA is predicted to experience **Moderate** adverse impact at construction and **Slight** impact after construction.

10.7.8.3 The proposed TCE station with several temporary work areas (included barging point) will be erected at the existing reclaimed land LCA7 Reclamation/ Ongoing Major Development Landscape. It is fully compatible with the surrounding landscape as the adjacent reclaimed land is for development as well during construction stages, and hence the magnitude of change is regarded to be **Negligible**. After construction, the landscape impact is considered to be permanent and the change is irreversible. Due to the small proportion of the LCA will be affected with the good compatibility, the magnitude of change is regarded to be **Small**. Hence, the LCA is predicted to experience **Insignificant** adverse impact at construction and **Slight** impact after construction.

10.7.8.4 The proposed TCW station and some temporary works areas will be within LCA9 Mixed Modern Comprehensive Urban Development Landscape. As the majority of the LCA will be preserved, the overall compatibility with surrounding landscape is fair. The magnitude of change is therefore considered to be **Small**. The LCA will also experience **Slight** adverse impacts during both stages.

10.7.8.5 A temporary work area next to Ma Wan New Village and a small extent of TCW Station will be erected within LR10 Urban Peripheral Village and Rural Fringe Landscape. As the overall sensitivity is rated as medium. And the magnitude of change is regarded to be **Small** given only a small portion will be affected. Hence, the LCA is predicted to experience **Moderate** impact during both phases.

10.7.8.6 The remaining LCAs will not have any impacts caused by the Project.

10.7.9 Magnitude of Change to VSRs

10.7.9.1 The potential sources of visual impact due to the Project are described in **Section 10.2.5**. The magnitude of visual change depends on a number of factors as outlined in the methodology of visual assessment, and with considering of the potential sources of visual impact above. The magnitude of change on VSRs is presented in **Table 10.13** below.

Table 10.13 Magnitude of Change on VSRs

VSR Code	Name	Blockage of View (Full/ Partial/ Nil)	Approx. Closest Viewing Distance to Project (m)	Scale of Development (Large/ Medium/ Small)	Compatibility with Surrounding Landscape (Good/ Fair/ Poor/ N/A ^[3])		Duration of Impact (Temporary/ Permanent)		Reversibility of Change (Reversible/ Irreversible)		Magnitude of Change (Large/ Intermediate/ Small/ Negligible)	
					CON ^[1]	OP ^[2]	CON ^[1]	OP ^[2]	CON ^[1]	OP ^[2]	CON ^[1]	OP ^[2]
Description of impacts during Construction and Operation												
VSR1	North Lantau Highway	Partial	110	Small	Fair	Fair	Temporary	Permanent	Irreversible	Irreversible	Small	Small
	<p>The VSR would mainly experience view towards the proposed TCE Station with TCL realignment. As the blockage of roadside amenity planting along NLH, it is anticipated that the majority of construction activities before operation would be screened.</p> <p>Similar to construction stage, the partial extent of the station would also be screened after operation. Given the visual changes would be considered as small without any mitigation measures, the magnitude of change for both stages are rated as Small.</p>											
VSR2	Planned Tung Chung New Town Extension	Partial	185	Medium	Fair	Fair	Temporary	Permanent	Irreversible	Irreversible	Small	Small
	<p>This VSR would mainly experience view towards the proposed TCE Station with TCL realignment. The view is dominated by the existing railway and NLH in the foreground. Given it is compatible with the surrounding landscape as the adjacent reclaimed land is for development as well during construction stages, the magnitude of changes during construction stage is rated as Small.</p> <p>After operation, it would also be compatible with surrounding transportation corridor with facilities, and slight change of visual character for this view is predicted for this VSR, the magnitude of change during operational stages is therefore rated as Small, even it is located in a close distance.</p>											
VSR3	Ying Tung Estate	Partial	125	Small	Good	Fair	Temporary	Permanent	Irreversible	Irreversible	Small	Negligible
	<p>This VSR would experience view towards the proposed TCE Station with TCL realignment and the proposed noise barrier. Given the proposed Station and the noise barrier are compatible with the surrounding landscape as the adjacent reclaimed land is for development as well during construction stages, the magnitude of changes during construction stage is rated as Small.</p>											

VSR Code	Name	Blockage of View (Full/ Partial/ Nil)	Approx. Closest Viewing Distance to Project (m)	Scale of Development (Large/ Medium/ Small)	Compatibility with Surrounding Landscape (Good/ Fair/ Poor/ N/A ^[3])		Duration of Impact (Temporary/ Permanent)		Reversibility of Change (Reversible/ Irreversible)		Magnitude of Change (Large/ Intermediate/ Small/ Negligible)	
					CON ^[1]	OP ^[2]	CON ^[1]	OP ^[2]	CON ^[1]	OP ^[2]	CON ^[1]	OP ^[2]
Description of impacts during Construction and Operation												
VSR4	The Visionary	Partial	135	Small	Good	Good	Temporary	Permanent	Reversible	Irreversible	Negligible	Negligible
	This VSR would experience view towards the proposed TCE Station with TCL realignment. Given most of the TCE Station with realignment would be blocked by Ying Tung Estate, this VSR would only have a glimpse view towards the proposed station in operation stage and the temporary work structures during construction stage. Considering the view towards the construction and operation would have insignificant visual change, the magnitude of change during both stages are rated as Negligible .											
VSR5	Caribbean Coast	Partial	180	Small	Fair	Good	Temporary	Permanent	Reversible	Irreversible	Small	Negligible
	This VSR would experience view towards the proposed TCE Station with TCL realignment, as well as the temporary work structures next to Tung Chung North Park during the construction stage. The proposed station is compatible with the surrounding landscape as the adjacent reclaimed land is for development as well during construction stages. Meanwhile, it would be also compatible with surrounding transportation corridor with facilities during operational stage, slight change of visual character for this view is predicted for this VSR. For the temporary work area, given it is compatible with the surrounding landscape as the adjacent small-scale infrastructures, e.g. Tung Chung Traction Substation, and the temporary work area would be returned for development. Hence, the magnitude of change during construction is rated as Small and Negligible during construction and operational stages respectively.											
VSR6	Sheraton Hong Kong Tung Chung Hotel	Nil	65	Medium	Fair	N/A	Temporary	N/A	Reversible	N/A	Small	N/A
	This VSR would mainly experience view towards the temporary barging point. Given the proposed barging point is compatible with the surrounding adjacent construction activities, the magnitude of change during construction is considered as Small . Besides, as the temporary work area would be returned for development after operation, no visual changes would be caused during operational stage.											
VSR7	Coastal Skyline	Partial	155	Small	Fair	N/A	Temporary	N/A	Reversible	N/A	Small	N/A
	This VSR would mainly experience view towards the temporary barging point. Similar to VSR6, given the proposed barging point is compatible with the surrounding adjacent construction activities, the magnitude of change during construction is considered as Small . Besides, as the temporary work area would be returned for development after operation, no visual changes would be caused during operational stage.											
VSR8	Chek Lap Kok Airport Island	Nil	880	Small	Fair	N/A	Temporary	N/A	Reversible	N/A	Negligible	N/A

VSR Code	Name	Blockage of View (Full/ Partial/ Nil)	Approx. Closest Viewing Distance to Project (m)	Scale of Development (Large/ Medium/ Small)	Compatibility with Surrounding Landscape (Good/ Fair/ Poor/ N/A ^[3])		Duration of Impact (Temporary/ Permanent)		Reversibility of Change (Reversible/ Irreversible)		Magnitude of Change (Large/ Intermediate/ Small/ Negligible)	
					CON ^[1]	OP ^[2]	CON ^[1]	OP ^[2]	CON ^[1]	OP ^[2]	CON ^[1]	OP ^[2]
Description of impacts during Construction and Operation												
This VSR would mainly experience view towards the temporary barging point. Similar to VSR7, given the proposed barging point is compatible with the surrounding adjacent construction activities of the TCNTE reclamation works, and has a distant view towards the barging point, the magnitude of change during construction is considered as Negligible . Besides, as the temporary work area would be returned for development after operation, no visual changes would be caused during operational stage.												
VSR9	Scenic Hill	Nil	670	Small	Poor	Poor	Temporary	Permanent	Irreversible	Irreversible	Negligible	Negligible
	This VSR would mainly experience view towards the proposed EAP/ EEP. Given this VSR has a long viewing distance to the proposed EAP/ EEP, the scale of development is hard to be noticed even it is not compatible with the surrounding landscape. The magnitude of change during construction stage is therefore considered as Negligible .											
VSR10	Tung Chung Crescent	Partial	60	Small	Fair	Fair	Temporary	Permanent	Irreversible	Irreversible	Small	Small
	This VSR would mainly experience view towards the proposed EAP/ EEP. According to the orientation of this view, it is anticipated that part of the proposed EAP/EEP would be visible from this viewpoint. While irreversible change would be caused in both construction and operational stages, given the small scale of the development, the magnitude of change during construction and operation are rated as Small .											
VSR11	Fu Tung Estate	Partial	85	Small	Fair	Fair	Temporary	Permanent	Irreversible	Irreversible	Small	Small
	This VSR would experience view towards the proposed EAP/ EEP. Similar to VSR 10, it is anticipated that part of the proposed EAP/ EEP would be visible from this viewpoint. While irreversible change would be caused in both construction and operational stage, given the small scale of the development, the magnitude of change during construction and operation are rated as Small .											
VSR12	Lantau North Country Park	Nil	710	Small	Good	Fair	Temporary	Permanent	Irreversible	Irreversible	Small	Small
	The VSR would mainly experience views towards the proposed TCE Station. As a result of the elevated views at far viewing distance, a small scale of station would be noticeable. Due to the small scale of the development from this viewpoint combined, and with good/ fair compatibility with surrounding landscape, the magnitude of change during construction and operation would be considered as Small .											
VSR13	Yu Tai Court	Nil	120	Small	Fair	N/A	Temporary	N/A	Reversible	N/A	Small	N/A
	This VSR would mainly experience view towards the proposed temporary work area next to Ma Wan New Village. As the temporary work area will be erected at the existing vacant land, it is compatible with the surrounding adjacent landscape, and no significant visual change would be caused. The magnitude of change during construction is therefore considered as Small . Besides, as the temporary work area would be reversed after operation, no visual changes would be caused during operational stage.											

VSR Code	Name	Blockage of View (Full/ Partial/ Nil)	Approx. Closest Viewing Distance to Project (m)	Scale of Development (Large/ Medium/ Small)	Compatibility with Surrounding Landscape (Good/ Fair/ Poor/ N/A ^[3])		Duration of Impact (Temporary/ Permanent)		Reversibility of Change (Reversible/ Irreversible)		Magnitude of Change (Large/ Intermediate/ Small/ Negligible)	
					CON ^[1]	OP ^[2]	CON ^[1]	OP ^[2]	CON ^[1]	OP ^[2]	CON ^[1]	OP ^[2]
Description of impacts during Construction and Operation												
VSR14	Ma Wan New Village	Partial	80	Medium	Fair	N/A	Temporary	N/A	Reversible	N/A	Intermediate	N/A
	<p>This VSR would mainly experience view towards the proposed temporary work area. As a result of adjacent to the proposed site, the whole footprint of the work area would be partly visible. However, given the temporary work area would be erected at the existing vacant land, the magnitude of change during construction is therefore considered to be Intermediate.</p> <p>As the temporary work area would be returned for development after operation, no visual changes would be caused during operational stage.</p>											
VSR15	Yu Tung Road	Partial	2	Small	Fair	Fair	Temporary	Permanent	Irreversible	Irreversible	Small	Small
	<p>The VSR would mainly experience views towards the proposed TCW Station with its vent shaft structures. As a result of blockage of roadside trees alongside, only small portion of the proposed station would be noticeable during both construction and operational phases. Due to the small scale of the development in the view combined with a fair compatibility with surrounding modern urban landscape, the magnitude of change during construction and operation are rated as Small.</p>											
VSR16	Yat Tung Estate	Nil	10	Medium	Fair	Fair	Temporary	Permanent	Irreversible	Irreversible	Intermediate	Intermediate
	<p>This VSR would mainly experience view towards the proposed TCW Station with its vent shaft structures. As a result of adjacent to the proposed site, the whole footprint of the station and its vent shaft works would be visible. Views towards the construction works would involve site clearance, site formation and erection of buildings' structures. Operational views would include appearance of new TCW Station with its vent shaft structures.</p> <p>Due to moderate scale of the development in the view combined with a fair compatibility with the existing natural landscape, the magnitude of change during construction and operation is considered to be Intermediate.</p>											
VSR17	Tung Chung Fort	Nil	150	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Negligible	Negligible
	<p>The view towards the proposed TCW would be fully screened by the roadside tree planting along Yu Tung Road and the extent of the proposed works would not be visible from this view. Due to the blockage of the natural vegetation in the view, the magnitude of change during construction and operation is considered to be Negligible.</p>											
VSR18	Mun Tung Estate	Partial	85	Small	Fair	Fair	Temporary	Permanent	Reversible	Irreversible	Small	Small
	<p>The VSR would mainly experience view towards the proposed TCW Station with its vent shaft structures, station entrances and several temporary work structures nearby. Views towards the Project would involve the erection of new built station and temporary works during construction stage. Furthermore, during operation, only a small extent of the proposed station with its vent shaft structures and station entrances would be visible. Given the compatibility of the development is considered to be fair during both construction and operation. With the small scale of the development, the magnitude of change during construction and operation are therefore considered to be Small.</p>											

VSR Code	Name	Blockage of View (Full/ Partial/ Nil)	Approx. Closest Viewing Distance to Project (m)	Scale of Development (Large/ Medium/ Small)	Compatibility with Surrounding Landscape (Good/ Fair/ Poor/ N/A ^[3])		Duration of Impact (Temporary/ Permanent)		Reversibility of Change (Reversible/ Irreversible)		Magnitude of Change (Large/ Intermediate/ Small/ Negligible)	
					CON ^[1]	OP ^[2]	CON ^[1]	OP ^[2]	CON ^[1]	OP ^[2]	CON ^[1]	OP ^[2]
Description of impacts during Construction and Operation												
VSR19	Ha Ling Pei Village	Nil	75	Medium	Fair	Fair	Temporary	N/A	Reversible	N/A	Intermediate	N/A
	<p>This VSR would mainly experience view towards the work site of the TCW station. Given its proximity to the proposed work sites, part of the works area would be visible from this viewpoint. Given the temporary work area would be erected at the existing vacant land, the magnitude of change during construction is therefore considered to be Intermediate.</p> <p>As the temporary work area would be reversed after operation, no visual changes would be caused during operational stage.</p>											
VSR20	Ma Wan Chung Village	Full	250	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Negligible	Negligible
	<p>The VSR would only be facing to the underground work site, none of the proposed works would be visible from this view. As a result of the full blockage from this viewpoint, the magnitude of change during both construction and operation phases are considered to be Negligible.</p>											
VSR21	Future Tung Chung West Promenade	Partial	125	Medium	Fair	Fair	Temporary	Permanent	Irreversible	Irreversible	Intermediate	Intermediate
	<p>The VSR would mainly experience view towards the proposed TCW Station and its temporary work area. The proposed above-ground north vent shaft structure and TCW entrance would be visible to the VSR which may lead to potential visual impact. As a result of the partial blockage from this viewpoint, the magnitude of changing during both construction and operation phase is considered to be intermediate.</p>											
VSR22	Tung Chung Line & Airport Express Line	Partial	110	Small	Fair	Fair	Temporary	Permanent	Irreversible	Irreversible	Small	Small
	<p>The VSR would mainly experience view towards the proposed TCE Station with TCL realignment. As the blockage of roadside amenity planting along NLH, it is anticipated that the majority of construction activities before operation would be screened.</p> <p>Similar to construction stage, the partial extent of the station would also be screened after operation. Given the visual changes would be considered as small without any mitigation measures, the magnitude of change for both stages are rated as Small.</p>											

Note:

[1] CON – Construction Phase.

[2] OP – Operational Phase.

[3] N/A – As the extent of the proposed development will not be noticeable, so would not be affected.

10.7.10 Significance of Impact on VSRs before Mitigation

10.7.10.1 Based on the sensitivity assessment of VSRs and the magnitude of change described above, the potential significance of the unmitigated visual impacts during the construction and operational phases have been evaluated.

10.7.10.2 The potential significance of visual impacts during the construction and operational phases, before mitigation, is provided in **Table 10.14** below. The assessment follows the methodology proposed in **Section 10.3** and the matrix provided in **Table 10.2**.

Table 10.14 Significance of impacts on VSRs before mitigation

VSR Code	Name	VSR Sensitivity (High/Medium/Low)	Magnitude of Change (Large/ Intermediate/ Small/ Negligible/ N/A ^[3])		Impact Significance BEFORE Mitigation (Substantial/ Moderate/ Slight/ Insignificant/ N/A)	
			Con ^[1]	Op ^[2]	Con	Op
VSR1	North Lantau Highway	Low	Small	Small	Slight	Slight
VSR2	Planned Tung Chung New Town Extension	High	Small	Small	Moderate	Moderate
VSR3	Ying Tung Estate	High	Small	Negligible	Moderate	Insignificant
VSR4	The Visionary	High	Negligible	Negligible	Insignificant	Insignificant
VSR5	Caribbean Coast	High	Small	Negligible	Moderate	Insignificant
VSR6	Sheraton Hong Kong Tung Chung Hotel	Medium	Small	N/A	Slight/ Moderate	N/A
VSR7	Coastal Skyline	High	Small	N/A	Moderate	N/A
VSR8	Chek Lap Kok Airport Island	Medium	Negligible	N/A	Insignificant	N/A
VSR9	Scenic Hill	Medium	Negligible	Negligible	Insignificant	Insignificant
VSR10	Tung Chung Crescent	High	Small	Small	Moderate	Moderate
VSR11	Fu Tung Estate	High	Small	Small	Moderate	Moderate
VSR12	Lantau North Country Park	Medium	Small	Small	Slight	Slight
VSR13	Yu Tai Court	High	Small	N/A	Moderate	N/A
VSR14	Ma Wan New Village	High	Intermediate	N/A	Moderate/ Substantial	N/A
VSR15	Yu Tung Road	Low	Small	Small	Slight	Slight

VSR Code	Name	VSR Sensitivity (High/Medium/Low)	Magnitude of Change (Large/ Intermediate/ Small/ Negligible/ N/A ^[3])		Impact Significance BEFORE Mitigation (Substantial/ Moderate/ Slight/ Insignificant/ N/A)	
			Con ^[1]	Op ^[2]	Con	Op
VSR16	Yat Tung Estate	High	Intermediate	Intermediate	Moderate/ Substantial	Moderate
VSR17	Tung Chung Fort	Medium	Negligible	Negligible	Insignificant	Insignificant
VSR18	Mun Tung Estate	High	Small	Small	Moderate	Moderate
VSR19	Ha Ling Pei Village	High	Intermediate	N/A	Moderate/ Substantial	N/A
VSR20	Ma Wan Chun Village	High	N/A	N/A	N/A	N/A
VSR21	Future Tung Chung West Promenade	Medium	Intermediate	Intermediate	Moderate	Moderate
VSR22	Tung Chung Line & Airport Express Line	Low	Small	Small	Slight	Slight

Note:

[1] CON – Construction Phase.

[2] OP – Operational Phase.

[3] N/A – As the extent of the proposed development will not be noticeable, so would not be affected.

10.7.11 Summary of Significance of Impacts on VSR before Mitigation Measures

10.7.11.1 Moderate visual impacts would be experienced by VSR2 Planned Tung Chung New Town Extension, VSR10 Tung Chung Crescent, VSR11 Fu Tung Estate, VSR16 Yat Tung Estate, VSR18 Mun Tung Estate VSR19 Ha Ling Pei Village and VSR21 Future Tung Chung West Promenade, which have direct and close view of the proposed at-grade structures, comprise TCE Station, TCW Station, station entrances, EAP/EEP and tentative works site respectively. The visual impacts would be caused by the construction works involving construction of buildings and structures during construction phase, and full visibility operation of new stations with its vent shaft structures and station entrances, which would cause small/ intermediate magnitude of change due to the small/ medium scale of development. Based on their high visual sensitivity as residential VSRs, moderate visual impact would be generated.

10.7.11.2 Furthermore, VSR3 Ying Tung Estate would also experience moderate visual impacts during construction stage. However, given the blockage of the future high-rise buildings in TCNTE, the impact significance would be considered as insignificant after operation. For VSR5 Caribbean Coast, given the distant view from this viewpoint, while the construction and operation of the proposed station

would have fair/ good compatibility with surrounding landscape, e.g. construction activities on TCNTE and the Transportation Corridor nearby, this VSR would experience insignificant visual impacts during operational stage. However, one of the temporary work areas for the launching/ retrieval shaft will be erected in a close distance, which would cause a moderate visual impact for the resident at Caribbean Coast during construction stage.

- 10.7.11.3** Apart from the construction and operation of the proposed TCW and TCE Stations with its vent shaft structures and station entrances, a series of temporary works sites/ areas and barging point would also generate visual impacts during construction stage. Hence, moderate visual impacts would be experienced by VSR6 Sheraton Hong Kong Tung Chung Hotel, VSR7 Coastal Skyline, VSR13 Yu Tai Court, and VSR14 Ma Wan New Village, which would have close view of the temporary construction works sites/ areas. Based on their high visual sensitivity as residential VSRs, moderate visual impacts could be caused during construction stage. As the temporary work area will be returned for development after operation, no visual changes would be caused during operational stage.
- 10.7.11.4** Slight visual impacts would be experienced by several VSRs facing to the proposed Stations. VSR1 North Lantau Highway, VSR15 Yu Tung Road and VSR22 Tung Chung Line & Airport Express Line represent passengers and drivers through the main roads, which would have slight sensitive to any visual change. Given small scale of the development, the VSRs would experience slight visual impacts during both construction and operational phases.
- 10.7.11.5** Although with a medium visual sensitivity, slight visual impact would be predicted due to small magnitude of change for the recreational VSR 12 (Lantau North Country Park). This VSR would have a panoramic view of TCNTE. Given the small scale of development would be located at the far distance, the magnitude of change would be considered as small, slight adverse impact would be generated during both phases.
- 10.7.11.6** Insignificant impact would be experienced for the following VSRs which would have negligible changes of view in relation to the development. VSR4 The Visionary, VSR8 Chek Lap Kok Airport Island and VSR9 Scenic Hill would experience insignificant change because having long viewing distances, the proposed structures or temporary works would not be noticeable from these VPs.
- 10.7.11.7** Given the fully blockage of roadside tree planting or existing building elements, the proposed stations or any temporary work areas cannot be seen by recreational VSR17 Tung Chung Fort and residential VSR20 Ma Wan Chun Village. No visual change is expected.

10.8 Landscape and Visual Mitigation Measures

10.8.1 General

10.8.1.1 The previous sections have identified the potential landscape and visual impacts due to the proposed stations and its vent shaft structures. A series of mitigation measure has been formulated in order to alleviate the effects of these impact where possible. It should be noted that design measures with intention to minimise overall landscape and visual impacts due to the development have also been incorporated into the layout plans during planning and design stages. This section will describe the summary of proposed mitigation measures incorporated into development layout plans to minimise adverse impacts.

10.8.2 Proposed Landscape and Visual Mitigation Measures

10.8.2.1 During the construction and operational phases, the mitigation measures listed, and responsibility matrix are provided in **Table 10.15**, which has been considered to address any potential residual landscape and visual impacts. The construction and operational mitigation measures focus on the methods of preservation or minimisation of potential impacts, will take effect during both phases.

Table 10.15 Mitigation measures for construction and operational phases

Mitigation Measure Code	Summary Description	Mitigate Landscape Impacts	Mitigate Visual Impacts	Funding/ Implementation	Maintenance/ Management Agency ^[3]
Construction Phase					
CM1 ^[1]	Tree Preservation	✓	-	MTRC	MTRC
CM2	Tree Transplanting	✓	-	MTRC	MTRC (Until handover to LCSD)
CM3	Landscape Reinstatement	✓	✓	MTRC	MTRC (Until handover to back to original maintenance/ management agency)
CM4	Lighting Control	-	✓	MTRC	MTRC
CM5	Erection of Screen Hoarding	-	✓	MTRC	MTRC
CM6	Optimization of Construction Areas	✓	✓	MTRC	MTRC
Operational Phase					
OM1 ^[2]	Compensatory Tree Planting	✓	-	MTRC	MTRC/ LCSD/ LandsD
OM2	Optimised Greening Provision on Structure	✓	✓	MTRC	MTRC

Mitigation Measure Code	Summary Description	Mitigate Landscape Impacts	Mitigate Visual Impacts	Funding/ Implementation	Maintenance/ Management Agency ^[3]
OM3	Landscape Integration and Screen Planting	✓	✓	MTRC	LCSD
OM4	Architectural Aesthetic Design of Built Structure	-	✓	MTRC	MTRC
OM5	Implement Aesthetic Design on Noise Barrier	-	✓	MTRC	MTRC

Note:

[1] CM – Construction Mitigation.

[2] OM – Operational Mitigation.

[3] The management / maintenance responsibility, in general, following DEVB TCW No. 6/2015 subject to agreement. The tree numbers are indicative only and the exact numbers are subjected to approval of TPRP.

10.8.2.2 The proposed mitigation measures are summarised below:

- CM1 Tree Preservation** – existing trees to be retained within the Project Site shall be protected carefully during construction. A detailed tree survey will be carried out for the Tree Preservation and Removal Proposal (TPRP) to be submitted to relevant government departments for approval in accordance with DEVB TCW No. 4/2020 at the later detailed design stage of the Project. Besides, Tree Protection Zone (TPZ) shall be set up throughout the construction stages;
- CM2 Tree Transplanting** – trees unavoidably affected by the Project works shall be transplanted where practical. Approx. 170 nos. of trees are proposed to be transplanted at Shun Tung Road and Yu Tung Road as shown in **Appendix 10.3**. The Project Proponent would implement the tree transplantation as proposed in the TPRP to be submitted to relevant government departments for approval in accordance with DEVB TCW No. 4/2020 at the later detailed design stage of the Project;
- CM3 Landscape Reinstatement** – all hard and soft landscape areas disturbed temporarily during construction shall be reinstated on like-to-like basis as far as possible, to the satisfaction of the relevant Government Departments.
- CM4 Lighting Control** – all security floodlights for construction sites should be carefully controlled to minimize light pollution and night-time glare to nearby users. The lighting installation will follow the Charter on External Lighting and Guidelines on Industry Best Practices for External Lighting Installations promulgated by Environment Bureau (ENB) as far as practicable.
- CM5 Erection of Screen Hoarding** – construction site hoarding should be erected around the work sites and work areas to screen pedestrian level views into the construction area from visual sensitive receivers. Hoarding design shall be compatible with the surrounding context as far as practicable.
- CM6 Optimization of Construction Areas** – Construction areas' control shall be enforced, where possible, to ensure that the landscape and visual

impacts arising from the construction activities are minimised. It includes optimising the extent of working areas and temporary works areas, management on storing and using the construction equipment and materials, and consideration of detailed schedules to shorten the construction period.

- **OM1 Compensatory Tree Planting** – It should be noted that the design of the stations and any above-ground structures such as entrances have been duly optimised to minimise the footprint and hence the associated landscape and visual impacts. Based on the development layout, approx. 2,100 no. of trees are proposed to be felled and compensated. However, there would not be sufficient space for the replanting of trees within the station areas. Nevertheless, the Project Proponent would implement the compensatory planting as proposed in the TPRP to be submitted to relevant government departments for approval in accordance with DEVB TCW No. 4/2020 to compensate for the trees to be felled. As far as practicable, implementation of compensatory tree planting should be of a ratio not less than 1:1 in terms of number of trees removed including dead trees, but excluding trees of undesirable species. Sufficient space should be provided for the compensatory trees from establishment to maturity to maximise tree health and stability. A number of possible compensatory tree planting locations have been identified as summarised below. The Project Proponent will actively liaise with all the relevant departments throughout the TPRP process.
 - (a) Tung Chung Area 113;
 - (b) TCE Station;
 - (c) Tung Chung Crescent;
 - (d) Shun Tung Road;
 - (e) TCW Station;
 - (f) Yu Tung Road;
 - (g) Hillside area near Tung Chung Road;
 - (h) Planned residential and commercial development atop Siu Ho Wan Depot; and
 - (i) Other areas to be identified.
- **OM2 Optimise Greening Provision on Structure** – implement greening measures that could alleviate the landscape and visual impacts of new development and help the development blend in with its surrounding landscape, which comprise implement rooftop greening to all above-ground structures against exposed building surfaces as far as possible, to reduce any undesirable impacts. According to the current design as shown in **Appendix 10.3**, the following greening provision would be implemented and these would be

further revisited and refined during the subsequent design stage and throughout the construction period.

Greening Provision	Area (m²), approx
Green roof at TCE Station	3,200
Green roof at TCW Station	900
Green roof at EAP/ EEP	600

- **OM3 Landscape Integration and Screen Planting** – plant tree screen/ buffer trees and shrubs to screen proposed stations and its vent shaft structures where appropriate. Approx. 8 no. of trees are proposed as a buffer planting. This measure would form part of the compensatory planting and will improve compatibility with the surrounding environment. According to the current design as shown in **Appendix 10.3**, a strip of street planting besides EAP /EEP along Shun Tung Road would be implemented. The extent and intensity would be further revisited and refined during the subsequent design stage and throughout the construction period.
- **OM4 Architectural Aesthetic Design of Built Structures** – ensure the building massing is compatible with its surroundings. To improve visual amenity, the following architectural aesthetic design features as shown in **Appendix 10.3** have been incorporated.
 - (a) The architectural character of the proposed structures in terms of form, material and surface detailing shall be complementary to the planned sub-urban character of TCE/natural-rural setting of TCW.
 - (b) The proposed vent shaft structures shall adopt a mild and subdued design to minimize potential visual impact to nearby residents/VSRs.
 - (c) The façade of the proposed pedestrian links/footbridges and TCE station shall adopt aesthetic pleasing design and enhance arrival/pedestrian experience, especially to the VSR at major open space (i.e. the planned metro plaza at Area 113).
 - (d) For the above-ground structure of the station entrances in TCW Station, the architectural design has incorporated transparent glass panels which would alleviate the bulk of the structure and allow natural light to penetrate into the station entrances. This would help to reduce the visual impacts of the station entrances.
 - (e) For the vent shaft structures in TCW, the building height would be kept to minimum. Given the natural environment in the backdrop, the selection of façade materials would be compatible with the surrounding natural elements. These would help to reduce the visual impacts of the vent shaft structures.

- (f) The TCE Station would be an above-ground structure of approximate height of about 20m along with the at-grade tracks of TCL. The concourse slab level facing the hillside and the skylight of the roof at the TCE Station would adopt transparent glass panels. In order to integrate skylights into the roof, the air-conditioning duct work would be relocated below the concourse slab level. These design features would allow natural light to penetrate into the concourse and help to reduce the associated visual impacts.
- (g) There are 2 pedestrian links connecting the TCE Station and Area 113 of the planned TCNTE (East) development. Each of these 2 pedestrian links has an approximately length of about 60m and a height of approximately 15m. In order to mitigate the visual impacts, glass panels will be adopted along the walls of these 2 pedestrian links. Similar to the case for station entrances in TCW Station, this design feature will alleviate the bulk of the structure and allow natural light to penetrate into the pedestrian links and would help to reduce the associated visual impacts.
- **OM5 Implement Aesthetic Design on Noise Barrier** – The visual impact of noise mitigation measures will be mitigated by appropriate detailed design to reduce visual bulkiness and incorporate aesthetically pleasing surface treatments to promote visual amenity, including a suitable combination of transparent and sound absorbent materials, appropriate colour selection of panels and supporting structures, as well as the design of supporting structures to incorporate a high level of quality and aesthetics. A combination of transparent panels and solid panels would lighten the visual impact, and at the same time maintain the attractiveness by using colourful panels.

10.8.2.3 Conceptual plans of the above-ground structures are provided in **Appendix 10.4** to illustrate the mitigation measures.

10.9 Residual Landscape and Visual Impact upon Mitigation

10.9.1 General

10.9.1.1 The potential residual impacts after the implementation of the proposed mitigation measures as described in **Table 10.13** have been identified. The potential significance of residual landscape impacts on LRs and LCAs during operation of the development, completion day 1 and year 10 are provided in **Table 10.16** and **Table 10.17**.

Table 10.16 Mitigation measures for construction and operational phases on LRs

ID Code	LRs	Sensitivity (Low/ Medium/ High)	Magnitude of Change (Negligible/ Small/ Intermediate/ Large)		Impact Significance Threshold before mitigation (Insignificant/ Slight/ Moderate/ Substantial)		Recommended Mitigation Measures	Residual Impact Significance Threshold after Mitigation (Insignificant/ Slight/ Moderate/ Substantial)		
			Construction	Operational	Construction	Operational		Construction	Operational	
									Day 1	Year 10
LR1	Secondary Woodland	High	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
LR2	Shrubland & Grassland	Medium	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
LR3	Plantation	Medium	Small	Small	Moderate	Moderate	CM1, CM2, CM3, CM6, OM1, OM2, OM3	Slight	Slight	Slight
LR4	Fung Shui Woodland	High	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
LR5	Agricultural Land	Medium	Large	Large	Moderate / Substantial	Moderate / Substantial	CM1, CM2, CM3, CM6, OM1, OM2, OM3	Moderate / Substantial	Moderate / Substantial	Moderate / Substantial
LR6	Mangrove	High	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
LR7	Reedbed	High	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
LR8	Coastal Water	Medium	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
LR9	Transitional Water	High	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
LR10a	Natural Watercourse	High	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
LR10b	Channelised Watercourse	Low	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
LR11a	Mudflat	High	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

ID Code	LRs	Sensitivity (Low/ Medium/ High)	Magnitude of Change (Negligible/ Small/ Intermediate/ Large)		Impact Significance Threshold before mitigation (Insignificant/ Slight/ Moderate/ Substantial)		Recommended Mitigation Measures	Residual Impact Significance Threshold after Mitigation (Insignificant/ Slight/ Moderate/ Substantial)		
			Construction	Operational	Construction	Operational		Construction	Operational	
									Day 1	Year 10
LR11b	Rocky Coastline	High	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
LR12	Artificial Seawall	Low	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
LR13a	Major Transport Corridor	Low	Intermediate	Small	Moderate	Slight	CM3, CM6, OM2, OM3	Slight	Slight	Insignificant
LR13b	Road & Urban Infrastructure	Low	Small	Negligible	Slight	Insignificant	CM1, CM2, CM3, CM6	Slight	Insignificant	Insignificant
LR14	Village Type Development	Medium	Small	N/A	Moderate	N/A	CM1, CM2, CM3, CM6	Slight	N/A	N/A
LR15	Urbanised Development	Low	Small	Small	Slight	Slight	CM1, CM2, CM3, CM6, OM1, OM2, OM3	Insignificant	Insignificant	Insignificant
LR16	Ongoing Reclamation Area	Low	Negligible	Small	Insignificant	Slight	CM3, CM6, OM2, OM3	Insignificant	Insignificant	Insignificant

Table 10.17 Mitigation measures for construction and operational phases on LCAs

ID Code	LCAs	Sensitivity (Low/Medium/High)	Magnitude of Change (Negligible/ Small/ Intermediate/ Large)		Impact Significance Threshold before mitigation (Insignificant/ Slight/ Moderate/ Substantial)		Recommended Mitigation Measures	Residual Impact Significance Threshold after Mitigation (Insignificant/ Slight/ Moderate/ Substantial)		
			Construction	Operational	Construction	Operational		Construction	Operational	
									Day 1	Year 10
LCA1	Inshore Water Landscape	Medium	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
LCA2	Strait Landscape	Medium	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
LCA3	Inter-tidal Coast Landscape	High	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
LCA4	Coastal Upland and Hillside Landscape	High	Small	Small	Moderate	Moderate	CM1, CM2, CM3, CM6, OM1, OM2, OM3	Slight	Slight	Slight
LCA5	Settled Valley Landscape	High	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
LCA6	Upland Hillside Landscape	High	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
LCA7	Reclamation/Ongoing Major Development Landscape	Low	Intermediate	Small	Moderate	Slight	CM3, CM6, OM2, OM3	Slight	Insignificant	Insignificant
LCA8	Transportation Corridor Landscape	Low	Small	Small	Slight	Slight	CM3, CM6	Slight	Insignificant	Insignificant
LCA9	Mixed Modern Comprehensive Urban	Low	Small	Small	Slight	Slight	CM3, CM6	Slight	Insignificant	Insignificant

ID Code	LCAs	Sensitivity (Low/Medium/High)	Magnitude of Change (Negligible/ Small/ Intermediate/ Large)		Impact Significance Threshold before mitigation (Insignificant/ Slight/ Moderate/ Substantial)		Recommended Mitigation Measures	Residual Impact Significance Threshold after Mitigation (Insignificant/ Slight/ Moderate/ Substantial)		
			Construction	Operational	Construction	Operational		Construction	Operational	
									Day 1	Year 10
	Development Landscape									
LCA10	Urban Peripheral Village and Rural Fringe Landscape	Medium	Small	Small	Moderate	Moderate	CM1, CM2, CM3, CM6, OM1, OM2, OM3	Slight	Slight	Slight
LCA11	Airport Landscape	Low	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
LCA12	Institutional Landscape	Medium	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
LCA13	Residential Urban Landscape	Low	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

10.9.2 Residual Landscape Impact on Landscape Resources

10.9.2.1 Since majority of LRs will not be in direct conflict with the proposed at-grade structures and temporary work areas, so there would be no landscape impacts to the LRs by this Project in general, except the following LRs.

10.9.2.2 The proposed TCE Station with TCL realignment will be mainly located at LR13a Major Transport Corridor and LR16 Ongoing Reclamation Area. Since the amenity value of these LRs are considered as low, with the implementation of mitigation measures such as landscape reinstatement (CM3), optimization of construction areas (CM6), optimised greening provision on structure (OM2) and landscape integration and screen planting (OM3), the impact would be reduced from slight to insignificant.

10.9.2.3 The proposed EAP/ EEP will be erected at LR3 Plantation. This would generate adverse landscape impacts due to the construction activities and loss of vegetation cover. After the provision of mitigation measures such as tree preservation (CM1), tree transplanting (CM2), landscape reinstatement (CM3), optimization of construction areas (CM6), compensatory tree planting (OM1), optimised greening provision on structure (OM2) and landscape integration and screen planting (OM3). The landscape impact on LR3 would be reduced from moderate to slight.

10.9.2.4 Construction and operation of TCW Station with its vent shaft structures and station entrances will be in direct conflict with LR5 Agricultural Land and LR15 Urbanised Development. It is anticipated that the vegetation covers within these LRs will be removed due to the construction works. With mitigation measures such as tree preservation (CM1), tree transplanting (CM2), landscape reinstatement (CM3), optimization of construction areas (CM6), compensatory tree planting (OM1), optimised greening provision on structure (OM2) and landscape integration and screen planting (OM3), however these measures are limited in terms of scale/ quantity as compared with the LR5. Hence, the residual landscape impact on LR5 after mitigation would be remained as substantial/ moderate. Furthermore, the proposed TCW station would be compatible with LR15. With the implementation of same mitigation measures as LR5, the landscape impact would be reduced from slight to insignificant.

10.9.2.5 Apart from the construction and operation of the proposed TCW and TCE Station, the vent shaft structures and station entrances a series of temporary works areas and barging point will be located at different LRs such as LR13b Road & Urban Infrastructure, and LR14 Village Type Development. For LR13b, the temporary work areas are likely to generate slight landscape impacts due to the small portion loss in terms of the LR area. The landscape impacts would be minimized from slight to insignificant with the implementation of mitigation measures, such as tree preservation (CM1), tree transplanting (CM2), landscape reinstatement (CM3) and optimization of construction areas (CM6). Besides, the proposed temporary works

would be compatible with LR14. With same mitigation measures as above, the landscape impact would be reduced from moderate to slight during construction.

10.9.3 Residual Landscape Impact on Landscape Character Areas

10.9.3.1 Similar to LRs, majority of LCAs would not be caused any landscape impacts given no works of the Project will take place on these LCAs, except the following LCAs.

10.9.3.2 There would be moderate landscape impacts on LCA4 Coastal Upland and Hillside Landscape and LCA10 Urban Peripheral Village and Rural Fringe Landscape due to portion of these LCAs will be overlapped with the proposed stations and EAP/EEP. After the implementation of mitigation measures such as tree preservation (CM1), tree transplanting (CM2), landscape reinstatement (CM3), optimization of construction areas (CM6), compensatory tree planting (OM1), optimised greening provision on structure (OM2) and landscape integration and screen planting (OM3), the landscape impacts would be mitigated to slight during both construction and operational stages.

10.9.3.3 A portion of proposed TCL and TCW alignment will be overlapped with LCA8 Transportation Corridor Landscape and LCA9 Mixed Modern Comprehensive Urban Development Landscape. There would be moderate impact due to the construction works of the alignment. With the implementation of mitigation measures such as landscape reinstatement (CM3) and optimization of construction areas (CM6), the landscape impact would be mitigated to slight during construction stage. Besides, the proposed developments are compatible with the existing landscape character, it is considered the residual impact would be insignificant during operational phases.

10.9.3.4 The installation of proposed TCE Station at LCA7 Reclamation/ Ongoing Major Development Landscape would only cause slight impact on the existing landscape character as the proposed works are fully compatible with the surrounding construction activities on reclamation land. With the implementation of mitigation measures such as landscape reinstatement (CM3), optimization of construction areas (CM6), optimised greening provision on structure (OM2) and landscape integration and screen planting (OM3), only insignificant residual impact would be caused.

10.9.4 Residual Visual Impact upon Mitigation

10.9.4.1 The potential residual impacts after the implementation of the proposed mitigation measures as described in **Table 10.13** have been identified. The potential significance of residual visual impacts on VSRs during operation of the development, completion day 1 and year 10 are provided in **Table 10.18**.

Table 10.18 Significance of residual impacts upon mitigation on VSRs

VSR Code	Name	Sensitivity (High/ Medium/ Low)	Magnitude of Change (Large/ Intermediate/ Small/ Negligible)		Impact Significance Before Mitigation (Substantial/ Moderate/ Slight/ Insignificant)		Recommended Mitigation Measures		Residual Impact Significance UPON Mitigation (Substantial/ Moderate/ Slight/ Insignificant)		
			CON	OP	CON	OP	CON	OP	CON	OP Day 1	OP Year 10
VSR1	North Lantau Highway	Low	Small	Small	Slight	Slight	CM3, CM4, CM5	OM2, OM3, OM4	Insignificant	Insignificant	Insignificant
VSR2	Planned Tung Chung New Town Extension	High	Small	Small	Moderate	Moderate	CM3, CM4, CM5	OM4, OM5	Slight	Slight	Slight
VSR3	Ying Tung Estate	High	Small	Negligible	Moderate	Insignificant	CM3, CM4	OM2, OM4, OM5	Slight	Insignificant	Insignificant
VSR4	The Visionary	High	Negligible	Negligible	Insignificant	Insignificant	CM3, CM4	OM2, OM3, OM4	Insignificant	Insignificant	Insignificant
VSR5	Caribbean Coast	High	Small	Negligible	Moderate	Insignificant	CM3, CM4, CM5	OM2, OM3, OM4	Slight	Insignificant	Insignificant
VSR6	Sheraton Hong Kong Tung Chung Hotel	Medium	Small	N/A	Slight /Moderate	N/A	CM3, CM4, CM5	N/A	Slight	N/A	N/A
VSR7	Coastal Skyline	High	Small	N/A	Moderate	N/A	CM3, CM4, CM5	N/A	Slight	N/A	N/A
VSR8	Chek Lap Kok Airport Island	Medium	Negligible	N/A	Insignificant	N/A	CM4	N/A	Insignificant	N/A	N/A
VSR9	Scenic Hill	Medium	Negligible	Negligible	Insignificant	Insignificant	CM3, CM4	OM2, OM3, OM4	Insignificant	Insignificant	Insignificant
VSR10	Tung Chung Crescent	High	Small	Small	Moderate	Moderate	CM3, CM4, CM5	OM2, OM3, OM4	Slight	Slight	Slight
VSR11	Fu Tung Estate	High	Small	Small	Moderate	Moderate	CM3, CM4, CM5	OM2, OM3, OM4	Slight	Slight	Slight
VSR12	Lantau North Country Park	Medium	Small	Small	Slight	Slight	CM3, CM4	OM2, OM3, OM4	Insignificant	Insignificant	Insignificant

VSR Code	Name	Sensitivity (High/ Medium/ Low)	Magnitude of Change (Large/ Intermediate/ Small/ Negligible)		Impact Significance Before Mitigation (Substantial/ Moderate/ Slight/ Insignificant)		Recommended Mitigation Measures		Residual Impact Significance UPON Mitigation (Substantial/ Moderate/ Slight/ Insignificant)		
			CON	OP	CON	OP	CON	OP	CON	OP Day 1	OP Year 10
VSR13	Yu Tai Court	High	Small	N/A	Moderate	N/A	CM3, CM4	N/A	Slight	N/A	N/A
VSR14	Ma Wan New Village	High	Intermediate	N/A	Moderate /Substantial	N/A	CM3, CM4	N/A	Slight	N/A	N/A
VSR15	Yu Tung Road	Low	Small	Small	Slight	Slight	CM3, CM4, CM5	OM2, OM3, OM4	Insignificant	Insignificant	Insignificant
VSR16	Yat Tung Estate	High	Intermediate	Intermediate	Moderate /Substantial	Moderate	CM3, CM4, CM5	OM2, OM4	Slight	Slight	Slight
VSR17	Tung Chung Fort	Medium	Negligible	Negligible	Insignificant	Insignificant	N/A	N/A	N/A	N/A	N/A
VSR18	Mun Tung Estate	High	Small	Small	Moderate	Moderate	CM3, CM4, CM5	OM2, OM3, OM4	Slight	Slight	Slight
VSR19	Ha Ling Pei Village	High	Intermediate	N/A	Moderate /Substantial	N/A	CM3, CM4, CM5	N/A	Slight	N/A	N/A
VSR20	Ma Wan Chun Village	High	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
VSR21	Future Tung Chung West Promenade	Medium	Intermediate	Intermediate	Moderate	Moderate	CM3, CM4, CM5	OM3, OM4	N/A	Slight	Slight
VSR22	Tung Chung Line & Airport Express Line	Low	Small	Small	Slight	Slight	CM3, CM4, CM5	OM2, OM3, OM4	Insignificant	Insignificant	Insignificant

10.9.5 Summary of Residual Impacts on VSRs

10.9.5.1 Photomontages for VSR (**Figures 10.10a to Figure 10.10d**) have been generated to provide views on the scale and extent of the proposed development. It should be noted that the photomontages intend to demonstrate only the scale and massing of the proposed development and effect of the proposed mitigation measures. The architectural design finishes or any other related detailed design components are subject to refinement and changes at the detailed design stage.

10.9.5.2 In summary, it is considered the implementation of mitigation measures, in particular screen planting, some greening measures such as green roof and/ or vertical greening, would provide significant enhancement to assist in visually integrating the new project into the existing landscape setting and help to alleviate the appearance of built form. Hence, majority of residual impacts in **Section 10.9.5** could be mitigated to acceptable level after the implementation of the proposed mitigation measures.

10.9.5.3 Moderate adverse impacts would be experienced by those medium/ high sensitivity VSRs, such as VSR2 Planned Tung Chung New Town Extension, , VSR10 Tung Chung Crescent, VSR11 Fu Tung Estate, VSR16 Yat Tung Estate, VSR18 Mun Tung Estate, VSR19 Ha Ling Pei Village and VSR21 Future Tung Chung West Promenade. The recommended mitigation measures such as landscape reinstatement (CM3), lighting control (CM4), and erection of screen hoarding (CM5), optimised greening provision on structure (OM2), landscape integration and screening planting (OM3), architectural aesthetic design of built structure (OM4) and Implement Aesthetic Design on Noise Barrier (OM5) would effectively alleviate the visual impacts for these VSRs during construction stages and enhance the visual compatibility with the existing landscape setting during the operational phase. Meanwhile, the future high-rise development at TCNTE would block the view of the proposed TCE Station and the TCL realignment on VSR3 Ying Tung Estate and VSR4 The Visionary. It is considered that visual impact of these VSR could be mitigated together with recommended mitigation measures such as landscape reinstatement (CM3), lighting control (CM4), optimised greening provision on structure (OM2), landscape integration and screening planting (OM3), architectural aesthetic design of built structure (OM4) and Implement Aesthetic Design on Noise Barrier (OM5). Furthermore, for some of the VSRs that have a distant view toward the small scale of proposed structures, such as VSR5 Caribbean Coast, VSR9 Scenic Hill, and VSR12 Lantau North Country Park. After the implementation of recommended mitigation measures such as landscape reinstatement (CM3), lighting control (CM4), optimised greening provision on structure (OM2), landscape integration and screening planting (OM3), and architectural aesthetic design of built structure (OM4), it is considered the residual impacts would be insignificant during both construction and operational phases.

10.9.5.4 It is considered that slight visual impacts would remain at slight/insignificant level during construction stage for low sensitivity VSRs such as VSR1 North Lantau Highway and VSR15 Yu Tung Road and VSR22 Tung Chung Line & Airport Express Line. With the mitigation measures such as landscape reinstatement (CM3), lighting control (CM4), and erection of screen hoarding (CM5), optimised greening provision on structure (OM2), landscape integration and screening planting (OM3), and architectural aesthetic design of built structure (OM4). These VSRs would remain as insignificant level during operational stage.

10.9.5.5 Apart from the construction and operation of the proposed at-grade structures, a series of scattered temporary works areas and barging point would also generate small to moderate impermanent visual impacts before operation, such as VSR6 Sheraton Hong Kong Tung Chung Hotel, VSR7 Coastal Skyline, VSR8 Chek Lap Kok Airport Island, VSR13 Yu Tai Court, and VSR14 Ma Wan New Village. The residual impacts would be mitigated to slight/ insignificant levels after the implementation of the construction mitigations, such as lighting control (CM4) during construction stage.

10.10 Cumulative Impact

10.10.1 General

10.10.1.1 Cumulative landscape and visual impacts during construction and operational phases from other projects in the vicinity are assessed and summarised in **Table 10.19** below. The concurrent projects extent is illustrated in **Figure 2.2**.

Table 10.19 Concurrent projects and potential cumulative impacts

Proposed development/on-going projects	Nature of the projects	Major potential landscape and visual impacts	Construction phase	Operational phase
Reprovisioning, Remedial and Improvement Works (RRIW)	Demolition and reprovision of the footbridge across Yu Tung Road to the south of Yat Tung Estate.	<p><u>Landscape</u></p> <p>Approximately 290 number of trees along Yu Tung Road will need to be fell due to the demolition and reprovision of footbridge across Yu Tung Road.</p> <p>Other than these trees, no valuable landscapes are currently present on the urbanised area, adverse landscape impact during both construction and operational phases is not anticipated.</p> <p><u>Visual</u></p> <p>Given the proposed works are compatible with the Project, it is anticipated that the cumulative visual impact would not be significant.</p>	<p>The respective project proponent will fulfil all the requirements for tree transplanting and landscape enhancement. On this basis, adverse cumulative landscape impacts are not anticipated</p> <p>It is anticipated that the design of the new footbridge will incorporate suitable aesthetic design to blend in with the environment. No visual impacts are therefore identified in construction stage.</p>	No additional landscape and visual impacts are identified during operation.
Siu Ho Wan Station and Siu Ho Wan Depot Replanning Works	Siu Ho Wan Depot (SHD) replanning in 4 major phases; podium deck and property enabling works for supporting the SHD Topside Development; and a new station and the associated trackwork, as well as local access roads and EVA.	<p><u>Landscape</u></p> <p>No natural landscape resources, or rare or protected species are recorded within SHD according to their approved EIA Report. Hence, adverse cumulative landscape impact during both construction and operational phases is not anticipated.</p> <p><u>Visual</u></p> <p>The SHD is located at more than 1km from the TCE Station and 5km from TCW Station. Given the large separation</p>	No significant cumulative landscape and visual impacts are identified in construction stage.	No significant cumulative landscape and visual impacts are identified during operation.

Proposed development/on-going projects	Nature of the projects	Major potential landscape and visual impacts	Construction phase	Operational phase
		distance from TCE Station and TCW Station, it is anticipated that the SHO and reprovisioned SHD would not cause any substantial cumulative visual impact on adjacent VSRs		
Proposed Comprehensive Residential and Commercial Development atop Siu Ho Wan Depot	Residential towers on a podium deck over the entire SHD along with associated recreational, schools, transportation facilities and open spaces etc.	<p><u>Landscape</u></p> <p>No valuable landscapes are recorded at the existing SHD according to their approved EIA Report. Adverse cumulative landscape impact during both construction and operational phases is not anticipated.</p> <p><u>Visual</u></p> <p>The SHD is located at more than 1km from the TCE Station and 5km from TCW Station. Given the large separation distance from TCE Station and TCW Station, it is anticipated that there will be no significant cumulative visual impact during construction and operational phase.</p>	No significant cumulative landscape and visual impacts are identified in construction stage.	No significant cumulative landscape and visual impacts are identified during operation.
Additional Sewerage Rising Main and Rehabilitation of the Existing Sewage Rising Main between Tung Chung and Siu Ho Wan	Construction of an additional sewage rising main of about 6.5km with diameter of 1200mm from Tung Chung sewage pumping station to Siu Ho Wan sewage treatment works and rehabilitation of the existing sewage rising main with diameter of 1200mm.	<p><u>Landscape</u></p> <p>The additional sewage rising main is located along Cheung Tung Road, therefore it is anticipated that no adverse landscape impact during construction and operational phases.</p> <p><u>Visual</u></p> <p>Given the additional sewage rising main is an underground utility along Cheung Tung Road, it is anticipated that the cumulative visual impact would not be significant.</p>	No significant cumulative landscape and visual impacts are identified in construction stage.	No significant cumulative landscape and visual impacts are identified during operation.
Expansion of Hong Kong International Airport into a Three-Runway System (3RS)	New land formation immediately north of HKIIA comprising associated taxiways, aprons, new passenger concourse buildings and	<p><u>Landscape</u></p> <p>No valuable landscapes are currently presented on the reclaimed island, adverse landscape impact during both construction and operational phases is not anticipated.</p>	No significant cumulative additional landscape and visual impacts are	No significant cumulative landscape and visual impacts are

Proposed development/on-going projects	Nature of the projects	Major potential landscape and visual impacts	Construction phase	Operational phase
	expansion of the existing Terminal 2 building	<p><u>Visual</u></p> <p>Given the 3RS development is located about 5km away from the Project, it is anticipated that there will be no significant cumulative visual impact during construction and operational phase.</p>	identified in construction stage.	identified during operation.
Tung Chung New Town Extension and its Associated Infrastructures (TCNTE)	New town development extension for accommodate 220,000 population to meet housing and other development needs.	<p><u>Landscape</u></p> <p>For TCE, no valuable landscapes are currently present on the reclamation area, adverse landscape impact during both construction and operational phases is not anticipated. For TCW, substantial landscape impacts are anticipated for some LRs and LCAs. However, with the implementation of mitigation measures such as woodland restoration, the landscape impact would be alleviated to moderate to slight eventually.</p> <p><u>Visual</u></p> <p>The new developments at TCNTE will be located at the close distance with the proposed TCE and TCW Station and TCL realignment. The TCNTE developments may block the views from residents at Ying Tung Estate (VSR3) towards TCE Station. However, with the implementation of mitigation measures such as aesthetic design of built development, the residual cumulative visual impacts from TCNTE development would be reduced to acceptable level as the development would be compatible with the visual character of surrounding areas.</p>	No significant cumulative additional landscape and visual impacts are identified in construction stage.	<p>Residents from Ying Tung Estate (VSR3) may experience slight additional visual impacts during operation.</p> <p>In addition, no additional landscape impacts are identified during operation.</p>
Skycity Development	Development of a commercial complex adjacent to HKIA	<p><u>Landscape</u></p> <p>No valuable landscapes are currently present on the reclaimed island, adverse landscape impact during both construction and operational phases is not anticipated.</p> <p><u>Visual</u></p>	No additional landscape and visual impacts are identified in construction stage.	Residents from Coastal Skyline (VSR7) may experience slight additional visual

Proposed development/on-going projects	Nature of the projects	Major potential landscape and visual impacts	Construction phase	Operational phase
		<p>The Skycity Development is located about 1.5km away from the Project, therefore potential visual impacts may be experienced by the residents at Coastal Skyline (VSR7). However, given Skycity Development would have a maximum building height restriction of approx. 53 mPD, the proposed commercial developments would be compatible with the surrounding buildings in Airport Island. In addition, with the implementation of mitigation measures such as sensitive design of building and structure, it is anticipated that the residual impacts would be reduced to acceptable level in the operational phase.</p>		<p>impacts during operation.</p> <p>In addition, no additional landscape impacts are defined during operation.</p>
Intermodal Transfer Terminal (ITT)	Development of a new building which serves intermodal transfer of passengers to and from HZMB	<p><u>Landscape</u></p> <p>No valuable landscapes are currently present on the reclaimed island, adverse landscape impact during both construction and operational phases is not anticipated.</p> <p><u>Visual</u></p> <p>Given the ITT is located about 3km away from the Project, the overall visual change would not be significant. As such, additional adverse visual impacts are not anticipated in both construction and operational phases.</p>	No additional landscape and visual impacts are identified in construction stage.	No additional landscape and visual impacts are identified during operation.
Road P1 (Tai Ho – Sunny Bay Section)	Construction of a new highway (namely Road P1) running parallel to the North Lantau Highway.	<p><u>Landscape</u></p> <p>No valuable landscapes are currently present on the urbanised area, adverse landscape impact during both construction and operational phases is not anticipated, subject to future detailed design.</p> <p><u>Visual</u></p> <p>Given the Road P1 is located about 2km away from the Project, the overall visual change would not be significant. As such, additional adverse visual impacts are not anticipated in both construction and operational phases.</p>	No additional landscape and visual impacts are identified in construction stage, subject to future detailed design.	No additional landscape and visual impacts are identified during operation, subject to future detailed design.

Proposed development/on-going projects	Nature of the projects	Major potential landscape and visual impacts	Construction phase	Operational phase
Planning, Engineering and Architectural Study for Topside Development at HKBCF Island of the HZMB – Feasibility Study	Topside Development at Hong Kong Boundary Crossing Facilities (HKBCF) Island of the Hong Kong-Zhuhai-Macau Bridge (HZMB).	<p><u>Landscape</u></p> <p>No valuable landscapes are currently presented on the reclaimed island, adverse landscape impact during both construction and operational phases is not anticipated.</p> <p><u>Visual</u></p> <p>Given it is located at the artificial island, which is a piece of reclaimed landmass, the development is considered compatible with the surrounding area. As such, additional adverse visual impacts are not anticipated in both construction and operational phases.</p>	No additional landscape and visual impacts are identified in construction stage.	No additional landscape and visual impacts are identified during operation.
Improvement Works for Ma Wan Chung Pier	Redevelopment of a pier	<p><u>Landscape</u></p> <p>No valuable landscapes are currently presented on the urbanised area, adverse landscape impact during both construction and operational phases is not anticipated.</p> <p><u>Visual</u></p> <p>Given the layout for the proposed improvement work is relatively small and located about 1km away from the Project, the improvement work is considered compatible with the surrounding area. As such, additional adverse visual impacts are not anticipated in both construction and operational phases.</p>	No additional landscape and visual impacts are identified in construction stage.	No additional landscape and visual impacts are identified during operation.
Tuen Mun – Chek Lap Kok Link (TMCLKL)	Dual-2 lane carriageway between northwest New Territories and HKBCF	<p><u>Landscape</u></p> <p>No valuable landscapes are currently presented on the urbanised area, adverse landscape impact during both construction and operational phases is not anticipated.</p> <p><u>Visual</u></p> <p>Given the TMCLKL is located about 2km away from the Project, the overall visual change would not be significant.</p>	No additional landscape and visual impacts are identified in construction stage.	No additional landscape and visual impacts are identified during operation.

Proposed development/on-going projects	Nature of the projects	Major potential landscape and visual impacts	Construction phase	Operational phase
		As such, additional adverse visual impacts are not anticipated in both construction and operational phases.		

10.11 Conclusion

10.11.1.1 The majority extent of the development is compatible with the surrounding local context, the project would generate insignificant to moderate/substantial adverse visual impact during construction phase and insignificant to moderate adverse visual impact during operational phase without the provision of mitigation measures.

10.11.1.2 With the provision of mitigation measures, most of the residual landscape impacts would be insignificant to slight by operation year 10. The likely residual visual impacts and possibility would be insignificant to slight by operation day 1 and operation year 10 when the mitigation measures have matured and taken effect. It is therefore anticipated that the overall residual landscape and visual impacts from the proposed scheme of Tung Chung Line Extension are considered acceptable with mitigation measures.