

11 Landscape and Visual

11.1 Legislation, Standards and Guidelines

11.1.1 General

11.1.1.1 The methodology for undertaking the landscape and visual impact assessment is in accordance with Annex 10 and 18 of the Technical Memorandum on Environment Impact Assessment Process, the EIAO Guidance Note No. 8/2010 and the EIA Study Brief No. ESB-271/2014. Legislation, standards and guidelines applicable to this assessment are as follows:

- Environmental Impact Assessment Ordinance (Cap. 499) and the Technical Memorandum on Environmental Impact Assessment Process (TM), particularly Annexes 10 and 18;
- Hong Kong Planning Standards and Guidelines (HKPSG) (Ch. 4, 10 & 11);
- EIAO Guidance Note No. 8/2010 on Preparation of Landscape and Visual Impact Assessment under the EIAO;
- Development Bureau Technical Circular (Works) (DEVB TCW) No. 07/2015 – Tree Preservation
- Environmental, Transport and Works Bureau Technical Circular (Works) (ETWB TCW) No. 29/2004 – Registration of Old and Valuable Trees, and Guidelines for their Preservation;
- DEVB TCW No. 06/2015 – Maintenance of Vegetation and Hard Landscape Features;
- DEVB TCW No. 2/2012 on Allocation of Space for Quality Greening on Road;
- WBTC No. 36/2004 – Advisory Committee on the Appearance of Bridges and Associated Structures (ACABAS);
- DEVB TC(W) No. 2/2013 – Greening on Footbridges and Flyovers;
- ETWB TCW No. 34/2003 Community Involvement in Greening Works;
- ETWB TCW No. 5/2005 on Protection of natural streams/rivers from adverse impacts arising from construction works;
- Town Planning Ordinance and Town Planning (Amendment) Ordinance (Cap.131);
- Country Park Ordinance (Cap. 208);
- Forests and Countryside Ordinance (Cap.96);

- Protection of Endangered Species of Animals And Plants Ordinance (Cap 586);
- Related Statutory Plans, e.g. Outline Zoning Plans;
- Geotechnical Engineering Office (GEO) Publication No.1/2011 Technical Guidelines on Landscape Treatment for Slopes;
- Landscape Value Mapping Study in Hong Kong;
- Green Infrastructure, the Greening, Landscape and Tree Management (GLTM) of DEVB;
- Measures on Tree Preservation, GLTM of DEVB; and
- DEVB TCW No.3/2012 Site Coverage of Greenery for Government Building Projects.

11.1.2 Review of Planning and Development Control Framework

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

11.1.2.2 The Assessment Area is covered by:

- Approved Man Kam To Outline Zoning Plan (OZP) (No.S/NE-MKT/2); and
- Approved Fu Tei Au and Sha Ling OZP (No.S/NE-FTA/14)

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

11.1.2.4 There are natural woodland, scrubland and wetland of high landscape value found within the Project boundary. The proposed work will not encroach in any Amenity Area (A), Conservation Area (CA), and Country Park (CP). The proposed development mainly falls within the Other Specific Use (Cemetery, Columbarium, Crematorium and Funeral Related Uses) zone. Only a small portion of the associated works will be fallen within Agricultural (AGR) zone and Green Belt (GB) zone.

11.1.2.5 Aerial photo showing the layout is given in **Figure 11.1.1**. The Project boundary is located within the Frontier Closed Area (FCA) and its future development has been studied in Agreement No. CE 60/2005 (TP)-Land Use Planning for Closed Area – Feasibility Study and The Land Use Planning for the Closed Area – Stage 2 Community Engagement Digest. The majority of the Project boundary is covered by the Man Kam To OZP.

11.1.2.6 The layout has been superimposed onto the existing OZPs to determine whether there is an effect on the zoned use (**Figure 11.1.2**). Areas of existing zonings affected are given in **Table 11.1** and **Table 11.2**.

Table 11.1 Approved Man Kam To Outline Zoning Plan (No.S/NE-MKT/2)

Zoning Type	Existing Area (ha)	Areas within the Project Boundary (ha)	Areas within the Work Areas (ha)
Government, Institution or Community (G/IC)	11.28	0.16	-
Other Specified Uses (Cemetery, Columbarium, Crematorium and Funeral Related Uses) (OU)	92.08	92.08	14.5
Other Specified Uses (Boundary Crossing Facilities) (OU)	10.14	3.58	-
Agriculture (AGR)	59.73	-	-
Green Belt (GB)	113.48	3.11	-
Village Type Development (V)	27.62	-	-
Recreation (REC)	15.01	-	-
Conservation Area (CA)	4.24	-	-

Table 11.2 Approved Fu Tei Au and Sha Ling OZP (No.S/NE-FTA/14)

Zoning Type	Existing Area (ha)	Areas within the Project Boundary (ha)	Areas within the Work Areas (ha)
Government, Institution or Community (G/IC)	23.58	0.26	-
Other Specified Uses (Poultry Slaughtering Centre) (OU)	1.3	-	-
Other Specified Uses (Port Back Uses) (OU)	7.5	-	-
Agriculture (AGR)	129.95	0.58	0.42
Green Belt (GB)	112.42	-	-
Open Storage (OS)	7.2	-	-

Table 11.2a Approved Tuen Mun OZP (No. S/TM/33)

Zoning Type	Existing Area (ha)	Areas within the Barging Point (ha)
Comprehensive Development Area (CDA)	9.0	1.7
Open Space (O)	0.9	0.19

11.1.2.7 **Table 11.1** summarizes the areas of existing zonings within overall Approved Man Kam To Outline Zoning Plan (No.S/NE-MKT/2). The area of each zoning type within the Project boundary and that within the work areas where impacts are considered to be largely irreversible except for areas under viaduct. There is no change to any of the existing zonings. The Project is therefore considered largely compatible with this Draft Outline Zoning Plan.

11.1.2.8 **Table 11.2** summarises the areas of existing zonings within the overall Approved Fu Tei Au and Sha Ling OZP (No.S/NE-FTA/14). The areas of each zoning type within the Project boundary and that within the work areas where impacts are considered to be largely irreversible. The permanent impact on 0.42ha AGR constitutes approximately 0.3% of the total area of this zoning type within this OZP, suggesting a relatively insignificant impact. They are all the works area at Sha Ling Road which fallen into the agricultural zone. The Project is therefore not considered to conflict with the OZP Plan.

11.1.2.9 **Table 11.2a** summarises the areas of existing zonings within the overall Tuen Mun OZP (No.S/TM/33). The proposed barging point at Siu Lam falls within Tuen Mun Outline Zoning Plan (No. S/TM/33), the works area will encroach the future Comprehensive Development Area (CDA) and Open Space (O), however, those zoning areas are not developed yet and the existing landscape value is considered to be low.

11.2 Relevant Projects

11.2.1.1 Certain projects that have been undertaken in and around the Project boundary have been referred for this Report.

11.2.1.2 Land Use Planning for the Closed Area, Planning Department (PlanD). The study examined the future use of the areas to be released from the Closed Area covering the current Project boundary with a view to putting them under planning control. It provided a sustainable planning framework to balance the needs for conservation and development within its Project boundary. The Recommended Development Plan (RDP) under the study served as the basis for the preparation of statutory town plans before the new boundary of the Closed Area came into effect in early 2012. According to this RDP, the current Project boundary was identified as having potential for cemetery related uses to meet the growing territorial demand. ‘Other Specified Use’ annotated ‘Cemetery’ was recommended as the zoning for the area. With reference to the RDP, the area is zoned “Other Specified Uses (Cemetery, Columbarium,

Crematorium and Funeral Related Uses)” on the Man Kam To Outline Zoning Plan.

- 11.2.1.3** Construction of a Secondary Boundary Fence and New Sections of Primary Boundary Fence and Patrol Road Phase 1, by Architectural Services Department (ArchSD) had been finished in 2012. Phase 2 will be completed by the end of 2015. The project mainly composed of the construction of a secondary boundary fence (SBF) along the southern edge of the existing boundary patrol road (BPR) (approximately 21.7km) from west (Pak Hok Chau) to east (Sha Tau Kok).
- 11.2.1.4** North East New Territories New Development Areas, Civil Engineering Development Department (CEDD). The North East New Territories New Development Areas Planning and Engineering Study (i.e. the NENT NDAs Study) formulates the development plans for the NDAs in Kwu Tung North (KTN), Fanling North (FLN) and Ping Che / Ta Kwu Ling (PC/TKL) to meet long-term housing, social, economic and environmental needs, and to formulate an implementation programme for first population intake to these NDAs by 2022. None of the three NDAs fall within the current Project boundary although the northern parts of KTN and FLN NDAs are less than 500 m from Sandy Ridge.
- 11.2.1.5** Development of Organic Waste Treatment Facilities Phase II Environmental Protection Department (EPD). EPD proposed the development of Organic Waste Treatment Facilities (OWTF) in Hong Kong, aiming to adopt proven biological treatment technologies to recover reusable materials and energy, such as compost, heat, electricity and biogas from source-separated organic waste which is currently being disposed of at landfills. OWTFs are expected to positively contribute to the Hong Kong SAR Government’s municipal solid waste management policy. The OWTFs are being developed in two phases, Phase I at Siu Ho Wan, North Lantau and Phase II at Shaling, North District. The OWTF phase II Preliminary Environment Review (PER) report was published in April 2011 and the Feasibility Study and EIA started in late 2011. The proposed site for Phase II is about 2.5ha and approximately 200m southeast from the current Project boundary. It is currently used as a livestock waste composting plant which will be demolished and replaced by the proposed OWTF Phase II. According to the PER, the implementation of the Project is not expected to have any further effect on the existing landscape character and visual quality within and around Sha Ling and direct impact to any trees is unlikely. The construction of the OWTF Phase II would start in 2014 and its operation is tentatively scheduled to start in 2016.
- 11.2.1.6** Widening of 2 Sections of Lin Ma Hang Road (Sections between Ping Yuen River and between Tsung Yuen Ha and Lin Ma Hang). The Project comprises of two PWP Items namely “Western Section” and “Eastern Section”.
- 11.2.1.7** Widening of Western Section of Lin Ma Hang Road between Ping Yuen River and Ping Che Road is road widening of about 0.75km of Lin Ma

Hang Road between Ping Yuen River and Ping Che Road to a 7.3m wide single two-lane carriageway with 2m wide footpath on both sides of the carriageway including the reconstruction and upgrade of the existing single lane vehicular bridge (N943) crossing Ping Yuen River to a two lanes bridge and associated drainage, traffic aids, street lighting, environmental mitigation works, landscaping works, slope works and other ancillary works.

- 11.2.1.8** Widening of eastern section of Lin Ma Hang Road between Tsung Yuen Ha and Lin Ma Hang is a road widening of about 3.15km of Lin Ma Hang Road between Tsung Yuen Ha and Lin Ma Hang to a 7.3m wide single two-lane carriageway with 2m wide footpath on both sides of the carriageway and provision of vehicle parking facilities at Wang Lek, associated drainage, traffic aids, street lighting, environmental mitigation works, landscaping works, slope works, bored pile walls and other ancillary works.

11.3 Assessment Methodology

- 11.3.1.1** Landscape and visual impacts will be assessed separately for the construction and operational phases.
- 11.3.1.2** The Landscape Impact Assessment (LIA) boundary includes the area within 500m distance from the Project boundary to better exam the compatibility of the Project with its surrounding environment.

Broad-brush Tree Survey and Vegetation Survey

- 11.3.1.3** Individual tree survey and group tree survey were conducted between May 2014 and September 2015. Individual tree survey was conducted at the area which have proposed works, as well as any area that will be potentially affected. All methodologies of individual tree survey has followed the DEVB TCW No. 07/2015 – Tree Preservation.
- 11.3.1.4** Broad-brush tree group survey was conducted at all areas within the 500m LIA boundary excluding the individual tree survey areas. Tree groups were identified on the basis of contiguous areas of vegetation with a similar character. Each tree group shall include the estimation percentage of the tree species distribution and its maturity by on site observation (refer to **Appendix 11.1** and **11.2**).
- 11.3.1.5** Vegetation survey work was conducted between August 2013 and December 2014. A vegetation survey was conducted during the late dry season and the wet season to record the dominant and notable plant species, their status in Hong Kong and relative abundance. The methodology of the vegetation survey has been detailed in **Section 9.3**.
- 11.3.1.6** Existing trees which meet one or more of the below criteria will be identified:

- trees of 100 years old or above;
- trees of cultural, historical or memorable significance e.g. Fung Shui tree, tree as landmark of monastery or heritage monument, and trees in memory of an important person or event;
- trees of precious or rare species;
- trees of outstanding form (taking account of overall tree sizes, shape and any special features) e.g. trees with curtain like aerial roots, trees growing in unusual habitat; or;
- trees with trunk diameter equal to or exceeding 1.0 metre (m) (measured at 1.3 m above ground level), or with height/canopy spread equal to or exceeding 25 m.

11.3.2 Landscape Impact Assessment Methodology

11.3.2.1 The assessment of landscape impacts will involve the following procedures:

- Identify the existing/planned/approved land uses as the part of baseline conditions. All direct and indirect impacts on existing /planned /approved land uses, and on future outlook of the area should be discussed;
- Identify and quantify the baseline conditions of landscape resources and landscape character areas found within the study area;
- Assess the degree of landscape sensitivity of the landscape resources and landscape character areas;
- Identify the potential sources of landscape impacts and assess the magnitude of change;
- Assess the significance thresholds of potential landscape impact (before mitigation);
- Identify the potential mitigation measures;
- Assess the significance thresholds of residual impact (after mitigation): operation Day 1 and Year 10.

11.3.2.2 Detailed descriptions of the above assessment methodology are given in the following sections.

Identify the existing/planned/approved land uses as the part of baseline conditions. All direct and indirect impacts on existing /planned /approved land uses, and on future outlook of the area should be discussed

11.3.2.3 This should cover the information in the statutory plans under the Town Planning Ordinance, and non-statutory plans. Relevant planning and landscape guidelines as recommended in planning studies, planning briefs or planning documents relevant to the assessment area such as landscape / urban design strategies, frameworks and concepts, building height profiles, special design areas, landmarks, designated view corridors, open space networks, landscape links and landscape character types, and any projects or planning studies surrounding.

Identify and quantify the baseline conditions of landscape resources and landscape character areas found within the study area

11.3.2.4 This is achieved by site visit and desktop study of topographical maps, information databases and photographs (refer to **Figures 11.1.1** and **11.3** series).

Assess the degree of landscape sensitivity of the landscape resources and landscape character areas

11.3.2.5 This is influenced by a number of factors including

- quality of landscape resources / characters;
- importance and rarity of special landscape elements;
- ability of the landscape to accommodate change;
- significance of the change in local and regional context;
- maturity of the landscape; and
- The factor of importance and rarity of special landscape elements cannot be applied on the landscape resources which related to abandon pond (LR5). The maturity of the landscape cannot be applied on the landscape resources which related to pond, marsh and wetland, and agricultural land (LR5, LR7, LR9, LR11, and LR20). For the entire landscape resources, the rest of factors will be considered to judge on its landscape sensitivity.

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

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

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

Low: Landscape or landscape resource of low valued landscape characteristics highly tolerant to change.

Identify the potential sources of landscape impacts and access the magnitude of change

11.3.2.7 These are the various elements of the construction works and operation procedures that would generate landscape impacts.

Assess the significance thresholds of potential landscape impact (before mitigation)

11.3.2.8 The magnitude of landscape impacts is classified as follows:

- Large:** The landscape or landscape resource would suffer major change.
- Intermediate:** The landscape or landscape resource would suffer moderate change.
- Small:** The landscape or landscape resource would suffer slight or barely perceptible change.
- Negligible:** The landscape or landscape resource would suffer no discernible change.

Identify the potential mitigation measures

11.3.2.9 Mitigation measures may take the form of adopting alternative designs or revisions to the basic engineering and architectural design to prevent and/or minimise adverse impacts; remedial measures such as colour and textural treatment of building features; and compensatory measures such as the implementation of landscape design measures (e.g. tree planting, creation of new open space etc.) to compensate for unavoidable adverse impacts and to attempt to generate potentially beneficial long term impacts. The agencies responsible for the funding, implementation, management and maintenance of the mitigation measures are identified and their approvals-in-principle are being sought.

11.3.2.10 The mitigation measures are provided and discussed in **Section 11.8**. The agencies responsible for the funding, implementation, and maintenance of the mitigation measures are proposed in **Table 11.9**.

**Assess the significance thresholds of residual impact (after mitigation):
operation Day 1 and Year 10**

11.3.2.11 Prediction of potential landscape impacts should cover beneficial / adverse, direct / indirect, short term / long term, reversible / irreversible and cumulative impacts. By synthesising the magnitude of the various impacts and the sensitivity of the various landscape resources it is possible to categorise impacts in a logical, well-reasoned and consistent fashion. **Table 11.3** shows the rationale for dividing the degree of significance into four thresholds, namely insubstantial, slight, moderate, and substantial, depending on the combination of a negligible-small-intermediate-large magnitude of impact and a low-medium-high degree of sensitivity of landscape resource/character. Residual impacts of each LR and LCA has been assessed in situation of the development without mitigation measures, development with mitigation measures operational (Day 1), and development with mitigation measures operational (Year 10). Mitigation measures will be identified and applied specifically on each affected landscape resources and landscape character areas to response the identified potential impacts during construction period and operation period.

Table 11.3 Relationship between Landscape Resources and Landscape Character Area sensitivity and impact magnitude in defining impact significance

		Receptor Sensitivity of Landscape Resource, Landscape Character Area		
		Low	Medium	High
Magnitude of Impact (Change)	Large	Moderate	Moderate / Substantial	Substantial
	Intermediate	Slight / Moderate	Moderate	Moderate / Substantial
	Small	Slight	Slight / Moderate	Moderate
	Negligible	Insubstantial	Insubstantial	Insubstantial

11.3.2.12 The significance of landscape impacts is categorised as follows:

Substantial: Adverse / beneficial impact where the proposal would cause significant deterioration or improvement in existing landscape quality.

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

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

Insubstantial: No discernible change in the existing landscape quality.

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

11.3.3 Visual Impact Assessment Methodology

11.3.3.1 The assessment of visual impacts has involved the following:

- Identify the of Zones of Visual Influence (ZVIs) during the construction and operational phase of the project;
- Identify the of Visual Sensitive Receivers (VSRs) within the Zone of Visual Influence (ZVIs) at construction and operational phases;
- Assess the degree of sensitivity to change of the VSRs;
- Identify the relative numbers of VSRs;
- Identify the potential sources of visual impacts;
- Assess the potential magnitude of visual impacts;
- Identify the potential visual mitigation measures; and
- Predict the significance of visual impacts before and after the implementation of the mitigation measures

Identify the ZVIs during the construction and operational phase of the project

11.3.3.2 This is achieved by site visit and desktop study of topographic maps and photographs, and preparation of cross-section to determine the visibility of the project from various locations.

Identify the VSRs within the ZVIs at construction and operational phases

11.3.3.3 These are the people who would reside within, work within, play within, or travel through, the ZVIs.

Assess the degree of sensitivity to change of the VSRs

11.3.3.4 Factors considered include:

- the type of VSRs, which is classified according to whether the person is at home, at work, at school, 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 and at school 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; and

- other factors which are considered (as required by EIAO Guidance Note No. 8/2010) include the number of individuals, value and quality of existing views, the availability and amenity of alternative views, number of VSRs, the duration or frequency of view, and the degree of visibility.

11.3.3.5 The sensitivity of VSRs is classified as follows:

- High:** The VSRs are highly sensitive to any change in their viewing experience.
- Medium:** The VSRs are moderately sensitive to any change in their viewing experience.
- Low:** The VSRs are only slightly sensitive to any change in their viewing experience.

Identify the relative numbers of VSRs

11.3.3.6 This is expressed in term of whether there are few, medium or many VSRs in any one category of VSR.

Identify the potential sources of visual impacts

11.3.3.7 These are the various elements of the construction works and operational procedures that would generate visual impacts.

Assess the potential magnitude of visual impacts

11.3.3.8 These are the various elements of the construction works and operational procedures that would generate visual impacts.

Assess the potential magnitude of visual impact

11.3.3.9 Factors considered include

- the compatibility with the surrounding landscape;
- the duration of the impact;
- the reversibility of the impact;
- the scale of the impact and distance of the source of impact from the viewer; and
- the degree of visibility of the impact, and the degree of which the impact dominates the field of vision of the viewer.

11.3.3.10 The magnitude of visual impacts is classified as follows:

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

Table 11.3a Relationship between receptor sensitivity and impact magnitude in defining impact significance

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

Identify the potential visual mitigation measures

11.3.3.11 These may take the form of adopting alternative designs or revisions to the basic engineering and architectural design to prevent and / or minimise adverse impacts, remedial measures such as colour and textural treatment of building features, and tree planting to screen the roads and associated bridge structures. The agencies responsible for the funding, implementation, maintenance of the mitigation measures are identified and their approval-in-principle has been sought.

Predict the significance of visual impacts before and after the implementation of the mitigation measures

11.3.3.12 Prediction of potential visual impacts should cover beneficial / adverse, direct / indirect, short term / long term, reversible / irreversible and cumulative impacts. By synthesising the magnitude of the various visual impacts and the sensitivity of the VSRs, and the numbers of VSRs that are affected, it is possible to categorise the degree of significance of the impacts in a logical, well-reasoned and consistent fashion. **Table 11.3** shows the rationale for dividing the degree of significance into four thresholds, namely, insubstantial, slight, moderate and substantial, depending on the combination of a negligible-small-intermediate-large magnitude of impact and a low-medium-high degree of sensitivity of VSRs.

11.3.3.13 The significance of visual impacts is categorised as follows:

- 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 noticeable deterioration or improvement in existing visual quality.
- Slight:** Adverse / beneficial impact where the proposal would cause barely perceptible deterioration or improvement in existing visual quality.
- Insubstantial:** No discernible change in the existing visual quality.

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

11.4 Tentative Project Programme

11.4.1.1 The tentative commencement year for the construction works would be mid 2017, and it would be completed in late 2022.

11.5 Landscape Baseline Study

11.5.1.1 The area covers MTR Lo Wu Station, the C&C facilities, the southern section of Sha Ling Road to be widened, a new road connection between Man Kam To Road and Sha Ling Road, an area north of the columbarium site, as well as east of the road network associated at Man Kam To. A total of eighteen LRs and six LCAs have been identified in this area.

11.5.1.2 LRs and LCAs found in the 500m buffer from the Project boundary are described in **Table 11.4** below along with their sensitivity, and illustrated in **Figures 11.2.1** and **11.2.2**. Photo records of these LRs and LCAs are shown in **Figures 11.3.1** to **11.3.8**.

11.5.1.3 In addition, an off-site barging point at Siu Lam will be utilised as part of this Project (see **Figure 1.3**). This barging point is currently in use for the Express Rail Link project. The site occupies developed area at Siu Lam along coastline. Minor construction works for the tipping halls and new ramps are required and would not involve any excavation. The landscape and visual impact of the barging point has been fully assessed in Express Rail Link EIA report, which was approved under EIAO with registered no. AEIAR-143/2009. Hence, it is considered that the landscape and visual impact is acceptable while all required mitigation measures stated in the Environmental Permit and EIA report (AEIAR-143/2009) applied.

Table 11.4 Landscape Resources / Landscape Character Areas and their sensitivity to change

ID. No.	Landscape Resources / Landscape Characters	Sensitivity (Low, Medium, High)												
LR1	<p><u>Hillside Woodland</u></p> <p>This LR refers to the largely patches of woodland forms at the valley and foothills. Woodlands in these areas predominantly border uphill grassland/ shrubland areas and sometimes adjoin plantation areas. Due to sheltered conditions of the valleys and limited human disturbance.</p> <p>This LR is relatively mature and has low ability to accommodate change. Its sensitivity is considered to be high.</p> <p><u>LR1.1 – Hillside Woodland Distribute at Valley</u></p> <p>Continuous patches of woodland forms at the valley of Sandy Ridge upland. They were sheltered from storms and hill fire events by the protection of the natural topography. Trees in this LR are mature and medium to large size. The woodland structure and the dominance of light demanding plant species understories and form a forest like appearance. Dense and mature vegetation are formed with the rich soil nutrition and natural water stream. Dominant tree species in the secondary forests include <i>Macaranga tanarius</i> var. <i>tomentosa</i>, <i>Ficus hispida</i>, <i>Celtis sinensis</i>, <i>Cinnamomum camphora</i> and <i>Schefflera heptaphylla</i>, while the woodland plantings are largely dominated by <i>Lophostemon confertus</i>.</p> <p>Protected species are found within this LR. One number of <i>Aquilaria sinensis</i> was recorded at the middle hill of the valley at the north of Sandy Ridge.</p> <p>1 no. of mature tree (with DBH ≥ 1m) found within this LR, namely <i>Bombax ceiba</i>. It is naturally grown along the exiting rural roadside area.</p> <p>Tree Groups distributed within this LR: TG01, TG30, TG31, TG32, TG39</p> <table border="1" data-bbox="353 1075 1659 1267"> <thead> <tr> <th>Quality (High/Medium/Low)</th> <th>Importance and Rarity (High/Medium/Low)</th> <th>Ability to accommodate change (High/Medium/Low)</th> <th>Significance of change in local and regional context (High/Medium/Low)</th> <th>Maturity (High/Medium/Low)</th> <th>Sensitivity (High/Medium/Low)</th> </tr> </thead> <tbody> <tr> <td>High</td> <td>High</td> <td>Low</td> <td>High</td> <td>High</td> <td>High</td> </tr> </tbody> </table>	Quality (High/Medium/Low)	Importance and Rarity (High/Medium/Low)	Ability to accommodate change (High/Medium/Low)	Significance of change in local and regional context (High/Medium/Low)	Maturity (High/Medium/Low)	Sensitivity (High/Medium/Low)	High	High	Low	High	High	High	High
Quality (High/Medium/Low)	Importance and Rarity (High/Medium/Low)	Ability to accommodate change (High/Medium/Low)	Significance of change in local and regional context (High/Medium/Low)	Maturity (High/Medium/Low)	Sensitivity (High/Medium/Low)									
High	High	Low	High	High	High									

ID. No.	Landscape Resources / Landscape Characters	Sensitivity (Low, Medium, High)												
	<p><u>LR1.2 – Hillside Woodland Distribute along the toe of Upland</u></p> <p>This was a more disturbed woodland formed along the slope toes and foothills of Sandy Ridge, as well as the adjacent upland within the assessment area, namely Crest Hill and Cheung Po Tau. Comparing with woodland in the valleys, these trees combination presented relatively young. There are also some graves and cemeteries found inside the woodland. This form of woodland were adjacent to the human activities. Some dead plant or mixture of natural vegetation and artificial plantation were commonly found at the edge of the woodland.</p> <p>Dominant species included <i>Lophostemon confertus</i>, <i>Ficus hispida</i>, <i>Melia azedarach</i>, and <i>Cassia siamea</i>.</p> <p>One mature <i>Aquilaria sinensis</i> was recorded at the eastern foothill of Sandy Ridge. Seedling young trees of <i>Aquilaria sinensis</i> were recorded at the woodland edge next to Sha Ling Road.</p> <p>Tree Groups distributed within this LR: TG13, TG17, TG18, TG22, TG23, TG25, TG24, TG26, TG27, TG35, TG36, TG37, TG2001, TG2002, TG2003, TG2027, TG2029, TG2030, TG2037, TG2040, TG2041, TG2043, TG2044, TG2048, TG2049, TG2050, TG2051, TG2058, TG2059</p> <table border="1" data-bbox="353 804 1659 995"> <thead> <tr> <th data-bbox="353 804 526 946">Quality (High/Medium/Low)</th> <th data-bbox="526 804 734 946">Importance and Rarity (High/Medium/Low)</th> <th data-bbox="734 804 1016 946">Ability to accommodate change (High/Medium/Low)</th> <th data-bbox="1016 804 1319 946">Significance of change in local and regional context (High/Medium/Low)</th> <th data-bbox="1319 804 1489 946">Maturity (High/Medium/Low)</th> <th data-bbox="1489 804 1659 946">Sensitivity (High/Medium/Low)</th> </tr> </thead> <tbody> <tr> <td data-bbox="353 946 526 995">High</td> <td data-bbox="526 946 734 995">High</td> <td data-bbox="734 946 1016 995">Low</td> <td data-bbox="1016 946 1319 995">Medium</td> <td data-bbox="1319 946 1489 995">Medium</td> <td data-bbox="1489 946 1659 995">High</td> </tr> </tbody> </table> <p><u>LR1.3 – Exposed Uphill Woodland</u></p> <p>Several woodland were spread over some small hills within the assessment area. Some degree of human activities were observed surrounding the woodland, such as the daily activities of Muk Wu and Muk Wu Nga Yiu villages, and the daily operation of Man Kam To Boundary Control Point and Food Control Office. The tree group density was relatively lower than the woodland found at the valley. An especially large piece of woodland formed at the eastern side of Sandy Ridge adjacent to Man Kam To Boundary Control Point. It was formed with more diverse floristic composition and complex structure. It was formed with mixture of native and exotic species included <i>Acacia confusa</i>, <i>Dimocarpus longan</i>, <i>Celtis sinensis</i>, and <i>Machilus pauhoi</i>.</p>	Quality (High/Medium/Low)	Importance and Rarity (High/Medium/Low)	Ability to accommodate change (High/Medium/Low)	Significance of change in local and regional context (High/Medium/Low)	Maturity (High/Medium/Low)	Sensitivity (High/Medium/Low)	High	High	Low	Medium	Medium	High	
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High	High	Low	Medium	Medium	High									

ID. No.	Landscape Resources / Landscape Characters						Sensitivity (Low, Medium, High)
	Tree Groups distributed within this LR: TG2052, TG2056, TG2057, TG2059						
	Quality (High/Medium/Low)	Importance and Rarity (High/Medium/Low)	Ability to accommodate change (High/Medium/Low)	Significance of change in local and regional context (High/Medium/Low)	Maturity (High/Medium/Low)	Sensitivity (High/Medium/Low)	
	High	High	Low	Medium	High	High	

ID. No.	Landscape Resources / Landscape Characters	Sensitivity (Low, Medium, High)												
LR2	<p><u>Hillside Shrubby Grassland</u></p> <p>This LR refers to an extensive area of grassland and scattered shrubland on the uplands. It always merges into hillside woodland and plantation at foothills and protected ravines. Isolated graves can sometimes be found scattered among the grasses. Small portion of tree groups are fallen within this LR, mainly along the edge of the area. However, its dominate planting are natural shrubs and grasses.</p> <p>This LR can re-establish itself easily and is therefore tolerant to changes. Its sensitivity is considered to be medium.</p> <p><u>LR2.1 – Uphill Shrubby Grassland</u></p> <p>This LR was largely formed at the uplands of Sandy Ridge, as well as the adjacent Cheung Po Tau and Kong Nga Po. It grow under high exposure area. Isolated graves are found scattered among the grasses. This LR along hill slopes in Hong Kong is typically fire-maintained. Several bush-fire occurred in the past few years in Sandy Ridge and therefore the new grass were in young form. Common plants include a variety of grasses and ferns (<i>Miscanthus sinensis</i>, <i>Dicranopteris pedata</i>, <i>Bidens pilosa</i>, <i>Ageratum conyzoides</i> and <i>Panicum maximum</i>), shrubs (<i>Rhaphiolepis indica</i>, <i>Embelia laeta</i>, <i>Rhus chinensis</i> and <i>Baeckea frutescens</i>) and small trees (<i>Cratoxylum cochinchinense</i>, <i>Phyllanthus emblica</i> and <i>Rhus chinensis</i>). Orchids group of <i>Arundina graminifolia</i> and <i>Habenaria dentate</i> are found. Both orchids are protected under Forestry and Countryside Ordinance (Cap. 96) and the Protection of Endangered Species of Animals and Plants Ordinance (Cap. 586).</p> <p>Tree Groups distributed within this LR: TG01, TG9, TG10, TG11, TG23, TG38</p> <table border="1" data-bbox="353 1029 1659 1220"> <thead> <tr> <th>Quality (High/Medium/ Low)</th> <th>Importance and Rarity (High/Medium /Low)</th> <th>Ability to accommodate change (High/Medium/Low)</th> <th>Significance of change in local and regional context (High/Medium/Low)</th> <th>Maturity (High/Mediu m/Low)</th> <th>Sensitivity (High/Mediu m/Low)</th> </tr> </thead> <tbody> <tr> <td>Medium</td> <td>High</td> <td>Medium</td> <td>Medium</td> <td>Low</td> <td>Medium</td> </tr> </tbody> </table> <p><u>LR2.2 - Foothill and Middle hill Shrubby Grassland</u></p> <p>This LR refers to a mosaic of shrubland and grassland form at the Cheung Po Tau, Lo Shu Ling, and Tai Shek Mo. It is</p>	Quality (High/Medium/ Low)	Importance and Rarity (High/Medium /Low)	Ability to accommodate change (High/Medium/Low)	Significance of change in local and regional context (High/Medium/Low)	Maturity (High/Mediu m/Low)	Sensitivity (High/Mediu m/Low)	Medium	High	Medium	Medium	Low	Medium	Medium
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Medium	High	Medium	Medium	Low	Medium									

ID. No.	Landscape Resources / Landscape Characters	Sensitivity (Low, Medium, High)																								
	<p>large in size and uniform in appearance. It merges into hillside woodland and plantation at foothills and protected ravines. Common species found include grasses such as <i>Imperata koenigii</i>, <i>Neyraudia reynaudiana</i>, <i>Bidens alba</i>, <i>Panicum maximum</i> and <i>Miscanthus spp.</i>, fern <i>Dicranopteris pedata</i> and shrubs <i>Baeckea frutescens</i>, <i>Breynia fruticosa</i>, <i>Litsea rotundifolia</i> var. <i>oblongifolia</i> and <i>Rhaphiolepis indica</i>. Those planting growth are considered as relatively better than those found within LR2.1. <i>Eulophia graminea</i> was recorded close to the trail on the hill and grassland to the north of Livestock Waste Control Centre. This orchid species has been recorded in restricted localities in Hong Kong, and found in grassy slopes, open fields and thin forest areas (AFCD, 2011). This species is protected under Cap. 96 and Cap. 586. <i>Rhododendron</i> species also found in the grassland located to the south-west of Sandy Ridge Cemetery Office, and within the Fujian Cemetery at Lo Wu Road, which is also protected under Cap. 96 and Cap. 586.</p> <p>Tree Groups distributed within this LR: TG11, TG12, TG18, TG20, TG24, TG25, TG27, TG28, TG32, TG36, TG37, TG38, TG39, TG2002, TG2003, TG2004, TG2041, TG2043, TG2047, TG2049, TG2050, TG2058, TG2059</p> <table border="1" data-bbox="353 754 1659 946"> <thead> <tr> <th>Quality (High/Medium/ Low)</th> <th>Importance and Rarity (High/Medium /Low)</th> <th>Ability to accommodate change (High/Medium/Low)</th> <th>Significance of change in local and regional context (High/Medium/Low)</th> <th>Maturity (High/Medium/ Low)</th> <th>Sensitivity (High/Medium/ Low)</th> </tr> </thead> <tbody> <tr> <td>Medium</td> <td>High</td> <td>Medium</td> <td>Medium</td> <td>Medium</td> <td>Medium</td> </tr> </tbody> </table> <p><u>LR2.3 – Crest Hill Shrubby Grassland</u></p> <p>This LR is located in the far west of the assessment area. The shrubby grassland at Crest Hill was relatively in a more mature form and with a more diverse form of fauna. Common species such as <i>Dicranopteris pedata</i>, <i>Neyraudia reynaudiana</i>, and <i>Miscanthus floridulus</i> are found within this area.</p> <p>Tree Groups distributed within this LR: TG2002, TG2058</p> <table border="1" data-bbox="353 1150 1659 1342"> <thead> <tr> <th>Quality (High/Medium/ Low)</th> <th>Importance and Rarity (High/Medium /Low)</th> <th>Ability to accommodate change (High/Medium/Low)</th> <th>Significance of change in local and regional context (High/Medium/Low)</th> <th>Maturity (High/Medium/ Low)</th> <th>Sensitivity (High/Medium/ Low)</th> </tr> </thead> <tbody> <tr> <td>Medium</td> <td>Medium</td> <td>Medium</td> <td>Medium</td> <td>High</td> <td>Medium</td> </tr> </tbody> </table>	Quality (High/Medium/ Low)	Importance and Rarity (High/Medium /Low)	Ability to accommodate change (High/Medium/Low)	Significance of change in local and regional context (High/Medium/Low)	Maturity (High/Medium/ Low)	Sensitivity (High/Medium/ Low)	Medium	High	Medium	Medium	Medium	Medium	Quality (High/Medium/ Low)	Importance and Rarity (High/Medium /Low)	Ability to accommodate change (High/Medium/Low)	Significance of change in local and regional context (High/Medium/Low)	Maturity (High/Medium/ Low)	Sensitivity (High/Medium/ Low)	Medium	Medium	Medium	Medium	High	Medium	
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LR3	<p><u>Lowland Grassland</u></p> <p>Several patches of grassland at the flat area are found near Nam Hang, adjacent to the foothill of Tai Shek Mo, and foothill of Cham Shan. Dominant plants of this resource are common low-growing grasses and ferns, including <i>Dicranopteris pedata</i>, <i>Paspalum conjugatum</i>, <i>Panicum repens</i>, <i>Palhinhaea cernua</i>, <i>Baeckea frutescens</i> and <i>Urena lobata</i>. Trees such as <i>Melia azedarach</i>, <i>Sapium sebiferum</i> and <i>Acacia spp.</i> also grow sparsely in the area. <i>Rhododendron mucronatum</i> and <i>Rhododendron pulchrum</i> var. <i>phoeniceum</i> were founded in the small piece grassland at southwest of Sandy Ridge. Those <i>Rhododendron</i> species are protected locally under Cap. 96 Forests and Countryside Ordinance. Similar to LR2 (Shrubby Grassland on Hillside), small portion of tree groups are fallen within this LR, mainly along the edge of the area. However, its dominate planting are natural shrubs and grasses. This LR can re-establish itself fairly easily and is therefore considered to be relatively tolerant to change. Its sensitivity is medium.</p> <table border="1" data-bbox="353 762 1659 959"> <thead> <tr> <th data-bbox="353 762 557 906">Quality (High/Medium/Low)</th> <th data-bbox="557 762 750 906">Importance and Rarity (High/Medium/Low)</th> <th data-bbox="750 762 1016 906">Ability to accommodate change (High/Medium/Low)</th> <th data-bbox="1016 762 1283 906">Significance of change in local and regional context (High/Medium/Low)</th> <th data-bbox="1283 762 1453 906">Maturity (High/Medium/Low)</th> <th data-bbox="1453 762 1659 906">Sensitivity (High/Medium/Low)</th> </tr> </thead> <tbody> <tr> <td data-bbox="353 906 557 959">Medium</td> <td data-bbox="557 906 750 959">Medium</td> <td data-bbox="750 906 1016 959">Medium</td> <td data-bbox="1016 906 1283 959">Medium</td> <td data-bbox="1283 906 1453 959">Medium</td> <td data-bbox="1453 906 1659 959">Medium</td> </tr> </tbody> </table>	Quality (High/Medium/Low)	Importance and Rarity (High/Medium/Low)	Ability to accommodate change (High/Medium/Low)	Significance of change in local and regional context (High/Medium/Low)	Maturity (High/Medium/Low)	Sensitivity (High/Medium/Low)	Medium	Medium	Medium	Medium	Medium	Medium	Medium
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Medium	Medium	Medium	Medium	Medium	Medium									
LR4	<p><u>Riverside Vegetation</u></p> <p>Trees planting are found along the two sides of the river channel. Grasscrete and low-maintenance grasses are found alongside to the Ng Tung River. Trees species included: <i>Acacia auriculiformis</i>, <i>Acacia confusa</i>, <i>Acacia mangium</i>, <i>Albizia lebbbeck</i>, <i>Leucaena leucocephala</i>, <i>Sapium sebiferum</i>. Trees are relatively in fair to poor form and they are common species which can easily be found within the area, thus the sensitivity is medium.</p> <table border="1" data-bbox="353 1150 1659 1345"> <thead> <tr> <th data-bbox="353 1150 557 1294">Quality (High/Medium/Low)</th> <th data-bbox="557 1150 750 1294">Importance and Rarity (High/Medium/Low)</th> <th data-bbox="750 1150 1016 1294">Ability to accommodate change (High/Medium/Low)</th> <th data-bbox="1016 1150 1283 1294">Significance of change in local and regional context (High/Medium/Low)</th> <th data-bbox="1283 1150 1453 1294">Maturity (High/Medium/Low)</th> <th data-bbox="1453 1150 1659 1294">Sensitivity (High/Medium/Low)</th> </tr> </thead> <tbody> <tr> <td data-bbox="353 1294 557 1345">Medium</td> <td data-bbox="557 1294 750 1345">Medium</td> <td data-bbox="750 1294 1016 1345">Medium</td> <td data-bbox="1016 1294 1283 1345">Low</td> <td data-bbox="1283 1294 1453 1345">Medium</td> <td data-bbox="1453 1294 1659 1345">Medium</td> </tr> </tbody> </table>	Quality (High/Medium/Low)	Importance and Rarity (High/Medium/Low)	Ability to accommodate change (High/Medium/Low)	Significance of change in local and regional context (High/Medium/Low)	Maturity (High/Medium/Low)	Sensitivity (High/Medium/Low)	Medium	Medium	Medium	Low	Medium	Medium	Medium
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LR5	<p><u>Abandoned Fish Pond</u></p> <p>Abandoned fish ponds that are partly included in the 500m LIA boundary. Two relatively large ponds are found at the eastern side of the Project boundary. They retain water throughout the year including both the dry and wet seasons. After being abandoned for several years, the ponds lack management. The other water ponds are mainly located north of Sheung Shui Water Treatment Works and beside the Sha Ling Livestock Waste Control Centre but also at the northern base of Cheung Po Tau. They are generally scattered in between the agricultural land.</p> <p>Their bunds are vegetated by grasses (e.g. <i>Bidens alba</i>, <i>Panicum maximum</i> and <i>Alocasia odora</i>) and low shrubs (e.g. <i>Lantana camara</i>), as well as some climbers (e.g. <i>Mikania micrantha</i> and <i>Ipomoea cairica</i>).</p> <p>The ponds are slightly overgrown with low landscape value, and are relatively intolerant to change. The sensitivity of this LR is considered to be medium.</p> <table border="1" data-bbox="353 735 1659 922"> <thead> <tr> <th data-bbox="353 735 546 874">Quality (High/Medium/Low)</th> <th data-bbox="546 735 752 874">Importance and Rarity (High/Medium/Low)</th> <th data-bbox="752 735 1016 874">Ability to accommodate change (High/Medium/Low)</th> <th data-bbox="1016 735 1281 874">Significance of change in local and regional context (High/Medium/Low)</th> <th data-bbox="1281 735 1487 874">Maturity (High/Medium/Low)</th> <th data-bbox="1487 735 1659 874">Sensitivity (High/Medium/Low)</th> </tr> </thead> <tbody> <tr> <td data-bbox="353 874 546 922">Medium</td> <td data-bbox="546 874 752 922">N/A</td> <td data-bbox="752 874 1016 922">Low</td> <td data-bbox="1016 874 1281 922">Medium</td> <td data-bbox="1281 874 1487 922">N/A</td> <td data-bbox="1487 874 1659 922">Medium</td> </tr> </tbody> </table>	Quality (High/Medium/Low)	Importance and Rarity (High/Medium/Low)	Ability to accommodate change (High/Medium/Low)	Significance of change in local and regional context (High/Medium/Low)	Maturity (High/Medium/Low)	Sensitivity (High/Medium/Low)	Medium	N/A	Low	Medium	N/A	Medium	Medium
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Medium	N/A	Low	Medium	N/A	Medium									
LR6	<p><u>Rural Development</u></p> <p>This LR in the vicinity of the Project boundary refers to the rural settlements along both sides of Man Kam To Road, Lo Wu Village, and extend to the rural settlement at the foothill of Tai Shek Mo. Lo Wu Village contains dense domestic houses that concentrate to the east of MTR Lo Wu Station. Most of the houses are old although some have been replaced by modern housing blocks of 2-3 storeys. Limited soft landscape treatment in this village includes some trees and private amenity planting. The village also included a school (Lo Wu Public School) in the north with an outdoor basketball court. The arrangement of village houses along both sides of Man Kam To Road and the foothill of Tai Shek Mo are rather loose, with winding paths running between houses. Many houses are fenced with open courtyards in front and surrounded by vegetation. Tree groups are found in piecemeal pattern, they are normally formed within some boundary fence or in a small group within the rural development. Fruit trees such as <i>Dimocarpus longan</i>, <i>Litchi chinensis</i>, <i>Annona squamosa</i> and <i>Carica papaya</i> are commonly found near the houses.</p>	Medium												

ID. No.	Landscape Resources / Landscape Characters	Sensitivity (Low, Medium, High)												
	<p>There are 2 no. of mature trees (with DBH ≥ 1m) within this LR, they are 1 no. of <i>Ficus elastic</i> and 1 no. of <i>Bombax ceiba</i>. They are naturally grown along the existing roadside.</p> <p>This LR is dominated by domestic houses. Its landscape amenity, significance and quality are moderate, and it is able to tolerate changes, this LR was included combination of both young vegetation and mature trees, therefore it overall importance and rarity is considered as medium, making its sensitivity medium.</p> <p>Tree Groups distributed within this LR: TG19, TG17, TG35, TG2002, TG2003, TG2005, TG2012, TG2015, TG2016, TG2031, TG2033, TG2035, TG2036, TG2043, TG2044, TG2045, TG2046, TG2047, TG2052, TG2054, TG2058, TG2064, TG2051, TG2050, TG2047, TG2042, TG2041, TG2039, TG2038, TG2040, TG2037, TG2030, TG2029, TG2028, TG2020, TG2019, TG2027, TG2023, TG2024, TG2025, TG2010, TG2060, TG2007, TG2062, TG2063, TG2065, TG2066, TG2011, TG2013, TG2032</p> <table border="1" data-bbox="353 762 1662 957"> <thead> <tr> <th>Quality (High/Medium/Low)</th> <th>Importance and Rarity (High/Medium/Low)</th> <th>Ability to accommodate change (High/Medium/Low)</th> <th>Significance of change in local and regional context (High/Medium/Low)</th> <th>Maturity (High/Medium/Low)</th> <th>Sensitivity (High/Medium/Low)</th> </tr> </thead> <tbody> <tr> <td>Medium</td> <td>Medium</td> <td>Medium</td> <td>Medium</td> <td>Medium</td> <td>Medium</td> </tr> </tbody> </table>	Quality (High/Medium/Low)	Importance and Rarity (High/Medium/Low)	Ability to accommodate change (High/Medium/Low)	Significance of change in local and regional context (High/Medium/Low)	Maturity (High/Medium/Low)	Sensitivity (High/Medium/Low)	Medium	Medium	Medium	Medium	Medium	Medium	
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LR7	<p><u>Marsh and Wetland</u></p> <p>This LR refers to freshwater wetland landscape resources. Several plots of marsh are located along the eastern sides of Ng Tung River, at the foothill of Tai Shek Mo. This LR provide marsh habitat, mainly for wetland dependent wildlife. As part of the habitat management, wetland plants and riparian vegetation have been planted.</p> <p>Based on the quality and the importance of the LR, it is considered that the sensitivity of this LR is medium.</p> <table border="1" data-bbox="353 1161 1662 1353"> <thead> <tr> <th>Quality (High/Medium/Low)</th> <th>Importance and Rarity (High/Medium/Low)</th> <th>Ability to accommodate change (High/Medium/Low)</th> <th>Significance of change in local and regional context (High/Medium/Low)</th> <th>Maturity (High/Medium/Low)</th> <th>Sensitivity (High/Medium/Low)</th> </tr> </thead> <tbody> <tr> <td>Medium</td> <td>High</td> <td>Low</td> <td>Medium</td> <td>N/A</td> <td>Medium</td> </tr> </tbody> </table>	Quality (High/Medium/Low)	Importance and Rarity (High/Medium/Low)	Ability to accommodate change (High/Medium/Low)	Significance of change in local and regional context (High/Medium/Low)	Maturity (High/Medium/Low)	Sensitivity (High/Medium/Low)	Medium	High	Low	Medium	N/A	Medium	Medium
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LR8	<p><u>Lowland Woodland</u></p> <p>This LR refers to the maturity tree groups which are found within the lowland plain area. Within the 500m LIA boundary, such tree groups are found beyond southwest of the Project boundary, adjacent to the agricultural land, and a small portion at the Man Kam To lowland, trees in this LR are mature and medium to large size. Dominant tree species are <i>Acacia confusa</i>, <i>Acacia auriculiformis</i>, <i>Celtis sinensis</i>, <i>Melaleuca cajuputi subsp. cumingiana</i> and <i>Macaranga tanarius var. tomentosa</i>.</p> <p>This LR is relatively mature and has low ability to accommodate change. Its sensitivity is considered to be high.</p> <p>Tree Groups distributed within this LR: TG2006, TG2007, TG2016, TG2023, TG2025, TG2027, TG2055</p> <table border="1" data-bbox="353 667 1659 858"> <thead> <tr> <th>Quality (High/Medium/Low)</th> <th>Importance and Rarity (High/Medium/Low)</th> <th>Ability to accommodate change (High/Medium/Low)</th> <th>Significance of change in local and regional context (High/Medium/Low)</th> <th>Maturity (High/Medium/Low)</th> <th>Sensitivity (High/Medium/Low)</th> </tr> </thead> <tbody> <tr> <td>High</td> <td>Medium</td> <td>Low</td> <td>Medium</td> <td>High</td> <td>High</td> </tr> </tbody> </table>	Quality (High/Medium/Low)	Importance and Rarity (High/Medium/Low)	Ability to accommodate change (High/Medium/Low)	Significance of change in local and regional context (High/Medium/Low)	Maturity (High/Medium/Low)	Sensitivity (High/Medium/Low)	High	Medium	Low	Medium	High	High	High
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LR9	<p><u>Wetland in Conservation Area</u></p> <p>Refers to part of the pond and marsh near Yuen Leng Chai, which are gazetted as Conservation Area (CA) under the Draft Man Kam To Development Permission Area Plan No. DPA/NE-MKT/3. The dominant wetland plant species colonising this LR include <i>Phragmites australis</i>, <i>Brachiaria mutica</i>, <i>Cyperus flabelliformis</i>, <i>Commelina diffusa</i>, <i>Cyclosorus interruptus</i> and <i>Fimbristylis spp.</i> The wetland was originally created as an ecological mitigation area associated with the previous Shenzhen River regulation works, but it is now in a relatively natural condition and intolerant to changes. This distinctive LR is therefore considered to have high sensitivity.</p> <table border="1" data-bbox="353 1166 1659 1353"> <thead> <tr> <th>Quality (High/Medium/Low)</th> <th>Importance and Rarity (High/Medium/Low)</th> <th>Ability to accommodate change (High/Medium/Low)</th> <th>Significance of change in local and regional context (High/Medium/Low)</th> <th>Maturity (High/Medium/Low)</th> <th>Sensitivity (High/Medium/Low)</th> </tr> </thead> <tbody> <tr> <td>High</td> <td>High</td> <td>Low</td> <td>High</td> <td>N/A</td> <td>High</td> </tr> </tbody> </table>	Quality (High/Medium/Low)	Importance and Rarity (High/Medium/Low)	Ability to accommodate change (High/Medium/Low)	Significance of change in local and regional context (High/Medium/Low)	Maturity (High/Medium/Low)	Sensitivity (High/Medium/Low)	High	High	Low	High	N/A	High	High
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High	High	Low	High	N/A	High									

ID. No.	Landscape Resources / Landscape Characters	Sensitivity (Low, Medium, High)												
LR10	<p><u>MacIntosh Fort</u> Refers to the Grade 2 historic building on the hilltop of Sandy Ridge to safeguard the border of Hong Kong against illegal immigrants in the past. This observation post is no longer functional and is enclosed by fence. Grasses and climbers (e.g. <i>Bidens pilosa</i>, <i>Youngia japonica</i>, <i>Lygodium japonicum</i> and <i>Ageratum conyzoides</i>) overgrow on the ground outside the post in the fenced area. This LR has cultural significance and high landscape value. It was a man-made structure and still has a reasonable capacity to accommodate change. This LR is considered to have high sensitivity.</p> <table border="1" data-bbox="353 592 1659 815"> <thead> <tr> <th data-bbox="353 592 544 767">Quality (High/Medium/Low)</th> <th data-bbox="544 592 752 767">Importance and Rarity (High/Medium/Low)</th> <th data-bbox="752 592 1016 767">Ability to accommodate change (High/Medium/Low)</th> <th data-bbox="1016 592 1279 767">Significance of change in local and regional context (High/Medium/Low)</th> <th data-bbox="1279 592 1487 767">Maturity (High/Medium/Low)</th> <th data-bbox="1487 592 1659 767">Sensitivity (High/Medium/Low)</th> </tr> </thead> <tbody> <tr> <td data-bbox="353 767 544 815">High</td> <td data-bbox="544 767 752 815">High</td> <td data-bbox="752 767 1016 815">Medium</td> <td data-bbox="1016 767 1279 815">High</td> <td data-bbox="1279 767 1487 815">Medium</td> <td data-bbox="1487 767 1659 815">High</td> </tr> </tbody> </table>	Quality (High/Medium/Low)	Importance and Rarity (High/Medium/Low)	Ability to accommodate change (High/Medium/Low)	Significance of change in local and regional context (High/Medium/Low)	Maturity (High/Medium/Low)	Sensitivity (High/Medium/Low)	High	High	Medium	High	Medium	High	High
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High	High	Medium	High	Medium	High									
LR11	<p><u>Agricultural Land</u> This LR refers to land used for agriculture including crops and orchards as well as ornamental plant nurseries, it is generally found beyond southwest of the Project boundary. This LR contains a small number of structures such as small irrigation ponds, green houses, equipment sheds and small / narrow hard paved areas. It not only contains agricultural vegetation but also some scattered non-agricultural vegetation including some shrubs and trees. It is often an intermediary between areas of development and natural areas. This habitat type includes both active and inactive agricultural lands in the south of Lo Wu Station Road, active and inactive agricultural lands are scattered randomly and some of those are periodically farmed. Those active agricultural lands are on the east side of Sha Ling Road, and the plant nurseries and orchards are scattered within existing villages in the assessment area, notably along the Lin Ma Hang Road. Tree groups are found in piecemeal pattern, within the agricultural. Some of the active farmland were acting as important role for the residents in the village, however, it is found that not all of the agricultural land were operated actively. All of these agricultural lands are located outside of the Project boundary and heavily disturbed / managed by existing villagers. Its significance and quality are moderate, and the maturity and importance of this LR are medium. Agricultural farmland</p>	Medium												

ID. No.	Landscape Resources / Landscape Characters	Sensitivity (Low, Medium, High)												
	<p>can be easily found within North District, they are normally scattered adjacent with villages, in which some were abandoned, its importance, rarity and significant are considered as medium. Its sensitivity is hence considered to be medium.</p> <p>Tree Groups distributed within this LR: TG2003, TG2004, TG2006, TG2007, TG2008, TG2009, TG2010, TG2011, TG2012, TG2014, TG2016, TG2017, TG2030, TG2037, TG2039, TG2041, TG2046, TG2050, TG2051, TG2052, TG2053, TG2054, TG2056, TG2057, TG2060, TG2062, TG2063</p> <table border="1" data-bbox="353 580 1659 770"> <thead> <tr> <th data-bbox="353 580 546 719">Quality (High/Medium/Low)</th> <th data-bbox="546 580 752 719">Importance and Rarity (High/Medium/Low)</th> <th data-bbox="752 580 1016 719">Ability to accommodate change (High/Medium/Low)</th> <th data-bbox="1016 580 1281 719">Significance of change in local and regional context (High/Medium/Low)</th> <th data-bbox="1281 580 1487 719">Maturity (High/Medium/Low)</th> <th data-bbox="1487 580 1659 719">Sensitivity (High/Medium/Low)</th> </tr> </thead> <tbody> <tr> <td data-bbox="353 719 546 770">Medium</td> <td data-bbox="546 719 752 770">Medium</td> <td data-bbox="752 719 1016 770">Low</td> <td data-bbox="1016 719 1281 770">Medium</td> <td data-bbox="1281 719 1487 770">N/A</td> <td data-bbox="1487 719 1659 770">Medium</td> </tr> </tbody> </table>	Quality (High/Medium/Low)	Importance and Rarity (High/Medium/Low)	Ability to accommodate change (High/Medium/Low)	Significance of change in local and regional context (High/Medium/Low)	Maturity (High/Medium/Low)	Sensitivity (High/Medium/Low)	Medium	Medium	Low	Medium	N/A	Medium	
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LR12	<p><u>Cemetery</u></p> <p>Refers to areas where large number of headstones or other monuments made of granite and similar materials rise vertically above the ground and cluster either along natural hillsides or on man-made terraces. This LR receives relatively intensive human influences especially during Ching Ming and Chung Yeung Festivals. Only limited vegetation grows among graves and the dominant species are grasses and climbers including <i>Dicranopteris pedata</i>, <i>Bidens pilosa</i>, <i>Helicteres angustifolia</i> and <i>Smilax china</i>. Small trees such as <i>Thuja orientalis</i> were occasionally found planted in close vicinity of graves for an ornamental purpose to increase the area's amenity value. Despite the predominance of man-made structures of this LR, some of the graves have been existed in the place for decades and only have a low to medium capacity to tolerate change. Its sensitivity is hence considered to be medium.</p> <p>Tree Groups distributed within this LR: TG06, TG10, TG32, TG33, TG34, TG35, TG38</p> <table border="1" data-bbox="353 770 1659 962"> <thead> <tr> <th>Quality (High/Medium/Low)</th> <th>Importance and Rarity (High/Medium/Low)</th> <th>Ability to accommodate change (High/Medium/Low)</th> <th>Significance of change in local and regional context (High/Medium/Low)</th> <th>Maturity (High/Medium/Low)</th> <th>Sensitivity (High/Medium/Low)</th> </tr> </thead> <tbody> <tr> <td>Low</td> <td>Medium</td> <td>Low</td> <td>Medium</td> <td>Medium</td> <td>Medium</td> </tr> </tbody> </table>	Quality (High/Medium/Low)	Importance and Rarity (High/Medium/Low)	Ability to accommodate change (High/Medium/Low)	Significance of change in local and regional context (High/Medium/Low)	Maturity (High/Medium/Low)	Sensitivity (High/Medium/Low)	Low	Medium	Low	Medium	Medium	Medium	Medium
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Low	Medium	Low	Medium	Medium	Medium									
LR13	<p><u>Vegetation at Engineered Slope</u></p> <p>Engineered cut slope is formed at the foothill of Sandy Ridge adjacent to MTR Lo Wu Station, and along Lo Wu Station Road. Some grasses and shrubs are growing on the rock surface and they are lack of maintenance. Small amount of trees are found at some slope with tree rings. The quality of such LR is low, and its overall sensitivity is considered as low.</p> <table border="1" data-bbox="353 1126 1659 1318"> <thead> <tr> <th>Quality (High/Medium/Low)</th> <th>Importance and Rarity (High/Medium/Low)</th> <th>Ability to accommodate change (High/Medium/Low)</th> <th>Significance of change in local and regional context (High/Medium/Low)</th> <th>Maturity (High/Medium/Low)</th> <th>Sensitivity (High/Medium/Low)</th> </tr> </thead> <tbody> <tr> <td>Low</td> <td>Low</td> <td>High</td> <td>Low</td> <td>Low</td> <td>Low</td> </tr> </tbody> </table>	Quality (High/Medium/Low)	Importance and Rarity (High/Medium/Low)	Ability to accommodate change (High/Medium/Low)	Significance of change in local and regional context (High/Medium/Low)	Maturity (High/Medium/Low)	Sensitivity (High/Medium/Low)	Low	Low	High	Low	Low	Low	Low
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LR14	<p><u>Natural Water Stream</u></p> <p>These natural streams come from the uphill of Sandy Ridge and flow down to the lowland rural area at Lo Wu. They are not perennial streams and water flow may cease during the dry season. The banks of these streams are overgrown with common grasses, particularly in the upstream sections where they flow through extensive grasslands. The downstream will run through to the channel along the man-made engineered slope. Its sensitivity is considered to be high.</p> <p>Due to its habitat value and the importance of the stream which supporting the ecological habitats adjacent. Its sensitivity is considered to be high.</p> <table border="1" data-bbox="353 625 1662 817"> <thead> <tr> <th data-bbox="353 625 546 762">Quality (High/Medium/Low)</th> <th data-bbox="546 625 752 762">Importance and Rarity (High/Medium/Low)</th> <th data-bbox="752 625 1016 762">Ability to accommodate change (High/Medium/Low)</th> <th data-bbox="1016 625 1281 762">Significance of change in local and regional context (High/Medium/Low)</th> <th data-bbox="1281 625 1487 762">Maturity (High/Medium/Low)</th> <th data-bbox="1487 625 1662 762">Sensitivity (High/Medium/Low)</th> </tr> </thead> <tbody> <tr> <td data-bbox="353 762 546 817">High</td> <td data-bbox="546 762 752 817">High</td> <td data-bbox="752 762 1016 817">Low</td> <td data-bbox="1016 762 1281 817">Medium</td> <td data-bbox="1281 762 1487 817">Medium</td> <td data-bbox="1487 762 1662 817">High</td> </tr> </tbody> </table>	Quality (High/Medium/Low)	Importance and Rarity (High/Medium/Low)	Ability to accommodate change (High/Medium/Low)	Significance of change in local and regional context (High/Medium/Low)	Maturity (High/Medium/Low)	Sensitivity (High/Medium/Low)	High	High	Low	Medium	Medium	High	High
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LR15	<p><u>Channelized River</u></p> <p>Refers to small sections of Shenzhen River and Ng Tung River, which are two modified watercourses located to the north and west of the Project boundary respectively. The two watercourses have been widened or channelized in phases for drainage improvement in northwest New Territories since 1990s. This LR is characterised by its engineered nature and straightening of the river banks with concrete, stone or grasscrete, as well as the associated paths and maintenance accesses. The vegetation mainly consists of grasses and shrubs, but also includes trees that grow spontaneously such as <i>Bombax ceiba</i> and the weedy species <i>Leucaena leucocephala</i>. This LR is one of the scenic elements in the local landscape context, but is reasonably capable of accommodating changes. Its sensitivity is considered to be medium.</p> <table border="1" data-bbox="353 1120 1662 1311"> <thead> <tr> <th data-bbox="353 1120 546 1257">Quality (High/Medium/Low)</th> <th data-bbox="546 1120 752 1257">Importance and Rarity (High/Medium/Low)</th> <th data-bbox="752 1120 1016 1257">Ability to accommodate change (High/Medium/Low)</th> <th data-bbox="1016 1120 1281 1257">Significance of change in local and regional context (High/Medium/Low)</th> <th data-bbox="1281 1120 1487 1257">Maturity (High/Medium/Low)</th> <th data-bbox="1487 1120 1662 1257">Sensitivity (High/Medium/Low)</th> </tr> </thead> <tbody> <tr> <td data-bbox="353 1257 546 1311">Low</td> <td data-bbox="546 1257 752 1311">Medium</td> <td data-bbox="752 1257 1016 1311">High</td> <td data-bbox="1016 1257 1281 1311">Medium</td> <td data-bbox="1281 1257 1487 1311">Medium</td> <td data-bbox="1487 1257 1662 1311">Medium</td> </tr> </tbody> </table>	Quality (High/Medium/Low)	Importance and Rarity (High/Medium/Low)	Ability to accommodate change (High/Medium/Low)	Significance of change in local and regional context (High/Medium/Low)	Maturity (High/Medium/Low)	Sensitivity (High/Medium/Low)	Low	Medium	High	Medium	Medium	Medium	Medium
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LR16	<p><u>Transportation Corridor</u></p> <p>This LR refers to those landscape resources found within sections of the MTRC East Rail and Man Kam To Road, as well as those transportation facilities includes traffic control points. The MTRC East Rail leading to MTR Lo Wu Station runs north-south to the west of the Project boundary and Man Kam To Road runs southwest-northeast to the south of the Project boundary. While no significant planting is found along the railway, trees along Man Kam To Road include both common roadside planting species (e.g. <i>Bombax ceiba</i>, <i>Eucalyptus citriodora</i> and <i>Ficus microcarpa</i>) and naturally growing species (e.g. <i>Macaranga tanarius var. tomentosa</i>, <i>Celtis sinensis</i> and the weedy species <i>Leucaena leucocephala</i>). Man-made and concrete form structure and road pavement are dominant within this LR, although roadside plantings are found in most sections of transportation corridor, they are common species and planted adjacent to heavy traffic, in which some lack maintenance. This LR has a man-made nature with low to moderate landscape value and a high ability to accommodate changes. Its sensitivity is considered to be low.</p> <table border="1" data-bbox="353 799 1659 991"> <thead> <tr> <th data-bbox="353 799 546 938">Quality (High/Medium/Low)</th> <th data-bbox="546 799 752 938">Importance and Rarity (High/Medium/Low)</th> <th data-bbox="752 799 1016 938">Ability to accommodate change (High/Medium/Low)</th> <th data-bbox="1016 799 1281 938">Significance of change in local and regional context (High/Medium/Low)</th> <th data-bbox="1281 799 1487 938">Maturity (High/Medium/Low)</th> <th data-bbox="1487 799 1659 938">Sensitivity (High/Medium/Low)</th> </tr> </thead> <tbody> <tr> <td data-bbox="353 938 546 991">Low</td> <td data-bbox="546 938 752 991">Low</td> <td data-bbox="752 938 1016 991">Medium</td> <td data-bbox="1016 938 1281 991">Low</td> <td data-bbox="1281 938 1487 991">Medium</td> <td data-bbox="1487 938 1659 991">Low</td> </tr> </tbody> </table>	Quality (High/Medium/Low)	Importance and Rarity (High/Medium/Low)	Ability to accommodate change (High/Medium/Low)	Significance of change in local and regional context (High/Medium/Low)	Maturity (High/Medium/Low)	Sensitivity (High/Medium/Low)	Low	Low	Medium	Low	Medium	Low	Low
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Low	Low	Medium	Low	Medium	Low									
LR17	<p><u>Vegetation along Utility Facilities</u></p> <p>This LR refers to vegetation growth along the major utility facilities along Man Kam To Road. Only some abandon grasses and scrub are found along the utility pipes. No significant planting is found. This resource has a man-made nature with low to medium landscape value and a high ability to accommodate changes. Its sensitivity is considered to be low.</p> <table border="1" data-bbox="353 1150 1659 1347"> <thead> <tr> <th data-bbox="353 1150 546 1289">Quality (High/Medium/Low)</th> <th data-bbox="546 1150 752 1289">Importance and Rarity (High/Medium/Low)</th> <th data-bbox="752 1150 1016 1289">Ability to accommodate change (High/Medium/Low)</th> <th data-bbox="1016 1150 1281 1289">Significance of change in local and regional context (High/Medium/Low)</th> <th data-bbox="1281 1150 1487 1289">Maturity (High/Medium/Low)</th> <th data-bbox="1487 1150 1659 1289">Sensitivity (High/Medium/Low)</th> </tr> </thead> <tbody> <tr> <td data-bbox="353 1289 546 1347">Low</td> <td data-bbox="546 1289 752 1347">Low</td> <td data-bbox="752 1289 1016 1347">High</td> <td data-bbox="1016 1289 1281 1347">Low</td> <td data-bbox="1281 1289 1487 1347">Low</td> <td data-bbox="1487 1289 1659 1347">Low</td> </tr> </tbody> </table>	Quality (High/Medium/Low)	Importance and Rarity (High/Medium/Low)	Ability to accommodate change (High/Medium/Low)	Significance of change in local and regional context (High/Medium/Low)	Maturity (High/Medium/Low)	Sensitivity (High/Medium/Low)	Low	Low	High	Low	Low	Low	Low
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LR18	<p><u>Pumping Station</u></p> <p>This LR refers to the vegetation growth within the Muk Wu Pumping Station. Several tree stands are scattered at the planting area in between the buildings. The rest of the landscaping area is mostly grasses with low amenity value and lack of maintenance. This landscape resource is considered low amenity value and high ability to accommodate changes. Its sensitivity is considered to be low.</p> <table border="1" data-bbox="353 550 1664 738"> <thead> <tr> <th data-bbox="353 550 544 691">Quality (High/Medium/Low)</th> <th data-bbox="544 550 757 691">Importance and Rarity (High/Medium/Low)</th> <th data-bbox="757 550 1014 691">Ability to accommodate change (High/Medium/Low)</th> <th data-bbox="1014 550 1283 691">Significance of change in local and regional context (High/Medium/Low)</th> <th data-bbox="1283 550 1485 691">Maturity (High/Medium/Low)</th> <th data-bbox="1485 550 1664 691">Sensitivity (High/Medium/Low)</th> </tr> </thead> <tbody> <tr> <td data-bbox="353 691 544 738">Low</td> <td data-bbox="544 691 757 738">Low</td> <td data-bbox="757 691 1014 738">High</td> <td data-bbox="1014 691 1283 738">Low</td> <td data-bbox="1283 691 1485 738">Low</td> <td data-bbox="1485 691 1664 738">Low</td> </tr> </tbody> </table>	Quality (High/Medium/Low)	Importance and Rarity (High/Medium/Low)	Ability to accommodate change (High/Medium/Low)	Significance of change in local and regional context (High/Medium/Low)	Maturity (High/Medium/Low)	Sensitivity (High/Medium/Low)	Low	Low	High	Low	Low	Low	Low
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Low	Low	High	Low	Low	Low									
LR19	<p><u>Plantation</u></p> <p>The plantation LR within the assessment area was found both along the hillside and the area with planted trees and shrubs in close proximity of disturbed areas, such as cemeteries as well as along main roads (e.g. Sha Ling Road and Lo Wu Station Road). This LR generally had a semi-closed canopy at a relatively uniform height of about five to eight metres and was extensively planted with the exotic tree species. The plantation at upland is relatively young with open canopies and the plantation along the toes is relatively more mature. There are also some graves and cemeteries found inside the plantation. Compared with the woodland on hillside, this LR has a more regular shape in terms of tree size and is more uniform in tree species. Trees growing in this LR have average heights ranging from 3 to 8 m. Most of the trees species are exotic, including <i>Lophostemon confertus</i>, <i>Acacia confusa</i>, <i>Acacia auriculiformis</i>, <i>Melaleuca quinquenervia</i> and <i>Delonix regia</i>. Nevertheless, native species such as <i>Cinnamomum camphora</i> and <i>Liquidambar formosana</i> can also be found planted in this LR. <i>Aquilaria sinensis</i> was recorded in the plantation area next to the road leading to Border District Police Headquarters and Division Police Station. Two <i>Aquilaria sinensis</i> were recorded from the roadside plantation at the eastern end of the Lin Ma Hang Road.</p> <p>This LR is mostly found adjacent to the woodland, with similar maturity at some area. However, it is considered that the value of the LR is relatively lower than the natural woodland. The sensitivity is considered to be medium.</p> <p>Tree Groups distributed within this LR: TG21, TG14, TG15, TG16, TG18, TG15, TG13, TG10, TG06, TG05, TG03,</p>	Medium												

ID. No.	Landscape Resources / Landscape Characters					Sensitivity (Low, Medium, High)
	TG01, TG29, TG32, TG38, TG2038, TG2030, TG2028, TG2026, TG2020, TG2021, TG2027, TG2023, TG2024, TG2025, TG2015, TG2035, TG2036					
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	Medium	Medium	Low	Medium	High	Medium

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LR20	<p><u>Active Fish Pond</u></p> <p>There are two large active fish ponds between Shenzhen River and the Project boundary. It is currently maintained by AFCD. This LR is considered have medium landscape value, and it has low ability to accommodate change. The sensitivity is therefore considered as high.</p> <table border="1" data-bbox="353 517 1664 707"> <thead> <tr> <th data-bbox="353 517 546 655">Quality (High/Medium/Low)</th> <th data-bbox="546 517 752 655">Importance and Rarity (High/Medium/Low)</th> <th data-bbox="752 517 1016 655">Ability to accommodate change (High/Medium/Low)</th> <th data-bbox="1016 517 1281 655">Significance of change in local and regional context (High/Medium/Low)</th> <th data-bbox="1281 517 1487 655">Maturity (High/Medium/Low)</th> <th data-bbox="1487 517 1664 655">Sensitivity (High/Medium/Low)</th> </tr> </thead> <tbody> <tr> <td data-bbox="353 655 546 707">High</td> <td data-bbox="546 655 752 707">High</td> <td data-bbox="752 655 1016 707">Low</td> <td data-bbox="1016 655 1281 707">Medium</td> <td data-bbox="1281 655 1487 707">N/A</td> <td data-bbox="1487 655 1664 707">High</td> </tr> </tbody> </table>	Quality (High/Medium/Low)	Importance and Rarity (High/Medium/Low)	Ability to accommodate change (High/Medium/Low)	Significance of change in local and regional context (High/Medium/Low)	Maturity (High/Medium/Low)	Sensitivity (High/Medium/Low)	High	High	Low	Medium	N/A	High	High
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High	High	Low	Medium	N/A	High									
LR21	<p><u>Wet Woodland</u></p> <p>The wet woodland is located to the north of the Project boundary, and is confined by the marsh area to the north and the woodland to the east, south and south-west parts. Due to the low topography of this wet woodland, it is fed by the seasonal watercourses flowing from the valleys of Sandy Ridge, and the rain water is then collected at the gully of the hill to feed the wet woodland. Water from this woodland is hydrologically connected with the marsh and mitigation ponds to the north of the wet woodland. A number of mature trees <i>C. nervosum</i> and <i>Acronychia pedunculata</i> form the tree canopy in this wet woodland, with numerous seedlings of <i>C. nervosum</i>, and other self-sown shrubs (including <i>Psychotria asiatica</i>, <i>Ligustrum sinense</i>, <i>G. lanceolarium</i> and <i>L. rotundifolia</i> var. <i>oblongifolia</i>) and trees (including <i>A. dioica</i> and <i>Litsea monopetala</i>). Common grass species <i>I. sinicus</i> were found in large clumps along the seasonal watercourse within the wet woodland.</p> <p>This LR is mature and has low ability to accommodate change. Its sensitivity is considered to be high.</p> <p>Tree Groups distributed within this LR: TG31, TG30</p> <table border="1" data-bbox="353 1161 1664 1351"> <thead> <tr> <th data-bbox="353 1161 546 1300">Quality (High/Medium/Low)</th> <th data-bbox="546 1161 752 1300">Importance and Rarity (High/Medium/Low)</th> <th data-bbox="752 1161 1016 1300">Ability to accommodate change (High/Medium/Low)</th> <th data-bbox="1016 1161 1281 1300">Significance of change in local and regional context (High/Medium/Low)</th> <th data-bbox="1281 1161 1487 1300">Maturity (High/Medium/Low)</th> <th data-bbox="1487 1161 1664 1300">Sensitivity (High/Medium/Low)</th> </tr> </thead> <tbody> <tr> <td data-bbox="353 1300 546 1351">High</td> <td data-bbox="546 1300 752 1351">High</td> <td data-bbox="752 1300 1016 1351">Low</td> <td data-bbox="1016 1300 1281 1351">High</td> <td data-bbox="1281 1300 1487 1351">High</td> <td data-bbox="1487 1300 1664 1351">High</td> </tr> </tbody> </table>	Quality (High/Medium/Low)	Importance and Rarity (High/Medium/Low)	Ability to accommodate change (High/Medium/Low)	Significance of change in local and regional context (High/Medium/Low)	Maturity (High/Medium/Low)	Sensitivity (High/Medium/Low)	High	High	Low	High	High	High	High
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High	High	Low	High	High	High									

ID. No.	Landscape Resources / Landscape Characters	Sensitivity (Low, Medium, High)												
LCA1	<p><u>Upland and Hillside Landscape</u></p> <p>Within the Project boundary of Sandy Ridge and its adjacent 500m LIA boundary, this LCA encompasses the Sandy Ridge upland (reaching 128mPD), northern portion of Cham Shan, and western portion of Tai Shek Mo. The natural upland is far away from the human activities. Wildfire was happen several times and affected its appearance and vegetation value in Sandy Ridge before. Woodland are also form within this LCA, it formed as dense and mature appearance distribute at the foothill and natural stream area. They grow with rich nutrition from the stream. Woodlands in these areas predominantly border uphill grassland/shrubland areas and sometimes adjoin plantation areas. The topography of the upland in the vicinity formed natural boundary surrounding Sandy Ridge site. Historical significant building ‘MacIntosh Fort’ is found at the uphill of the Sandy Ridge upland.</p> <p>This LCA is predominantly natural and of high quality. It is a significant LCA within the Study Area and has a low tolerance to change. Therefore its sensitivity is considered to be high.</p> <table border="1" data-bbox="356 762 1624 1002"> <thead> <tr> <th data-bbox="356 762 557 938">Quality (High/Medium/Low)</th> <th data-bbox="557 762 761 938">Importance and Rarity (High/Medium/Low)</th> <th data-bbox="761 762 952 938">Ability to accommodate change (High/Medium/Low)</th> <th data-bbox="952 762 1216 938">Significance of change in local and regional context (High/Medium/Low)</th> <th data-bbox="1216 762 1420 938">Maturity (High/Medium/Low)</th> <th data-bbox="1420 762 1624 938">Sensitivity (High/Medium/Low)</th> </tr> </thead> <tbody> <tr> <td data-bbox="356 938 557 1002">High</td> <td data-bbox="557 938 761 1002">High</td> <td data-bbox="761 938 952 1002">Low</td> <td data-bbox="952 938 1216 1002">High</td> <td data-bbox="1216 938 1420 1002">High</td> <td data-bbox="1420 938 1624 1002">High</td> </tr> </tbody> </table>	Quality (High/Medium/Low)	Importance and Rarity (High/Medium/Low)	Ability to accommodate change (High/Medium/Low)	Significance of change in local and regional context (High/Medium/Low)	Maturity (High/Medium/Low)	Sensitivity (High/Medium/Low)	High	High	Low	High	High	High	High
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High	High	Low	High	High	High									
LCA2	<p><u>Rural Inland Plain Landscape</u></p> <p>This LCA refers to rural village areas on the fringe of the extensive natural vegetated hillsides. It is dominated by small and medium sized villages with modern and traditional domestic houses, interspersed with fragmented agricultural plots and comprises a broad mix of other land uses including water ponds, schools, sports grounds and open storages. This LCA also has some patches of woodland as well as vegetation associated with the villages. Within the 500m buffer this LCA is mainly found at the foothill of Tai Shek Mo, to the east of MTR Lo Wu Station and along both sides of Man Kam To Road. This LCA is considered to have medium tolerance to change and moderate amenity value. Its sensitivity is therefore medium.</p>	Medium												

ID. No.	Landscape Resources / Landscape Characters						Sensitivity (Low, Medium, High)												
	Quality (High/Medium/Low)	Importance and Rarity (High/Medium/Low)	Ability to accommodate change (High/Medium/Low)	Significance of change in local and regional context (High/Medium/Low)	Maturity (High/Medium/Low)	Sensitivity (High/Medium/Low)													
	Medium	Medium	Medium	Medium	Medium	Medium													
LCA3	<p><u>Cemetery Landscape</u> Refers to significant areas designated as cemetery in the northwest and southwest of the Project boundary. This LCA is located at low lying hills with grassland and scrubland that contain a large number of graves concentrated throughout in a stepped pattern. The landscape serves social interest but does not have high landscape value given the propensity for hill fires started during traditional festivals. Therefore the sensitivity of this LCA is considered to be medium.</p> <table border="1" data-bbox="353 866 1624 1129"> <thead> <tr> <th data-bbox="353 866 557 1062">Quality (High/Medium/Low)</th> <th data-bbox="557 866 761 1062">Importance and Rarity (High/Medium/Low)</th> <th data-bbox="761 866 954 1062">Ability to accommodate change (High/Medium/Low)</th> <th data-bbox="954 866 1216 1062">Significance of change in local and regional context (High/Medium/Low)</th> <th data-bbox="1216 866 1420 1062">Maturity (High/Medium/Low)</th> <th data-bbox="1420 866 1624 1062">Sensitivity (High/Medium/Low)</th> </tr> </thead> <tbody> <tr> <td data-bbox="353 1062 557 1129">Low</td> <td data-bbox="557 1062 761 1129">Medium</td> <td data-bbox="761 1062 954 1129">Low</td> <td data-bbox="954 1062 1216 1129">Medium</td> <td data-bbox="1216 1062 1420 1129">Medium</td> <td data-bbox="1420 1062 1624 1129">Medium</td> </tr> </tbody> </table>						Quality (High/Medium/Low)	Importance and Rarity (High/Medium/Low)	Ability to accommodate change (High/Medium/Low)	Significance of change in local and regional context (High/Medium/Low)	Maturity (High/Medium/Low)	Sensitivity (High/Medium/Low)	Low	Medium	Low	Medium	Medium	Medium	Medium
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Low	Medium	Low	Medium	Medium	Medium														
LCA4	<p><u>Major Transportation Corridor Landscape</u> Two major transportation corridors are found within the 500m LIA boundary, they are the general MTRC East Rail and its associated facilities, and Man Kam To Road at the south of the Project boundary. This LCA includes the station and boundary crossing at Lo Wu. Screening roadsides trees are found along most major road corridors. It is considered to be highly tolerant to changes,</p>						Medium												

ID. No.	Landscape Resources / Landscape Characters	Sensitivity (Low, Medium, High)												
	<p>however, due to the roadsides planting and the existing greenery of the riverfront, its sensitivity is medium.</p> <table border="1" data-bbox="353 400 1637 639"> <thead> <tr> <th data-bbox="353 400 557 576">Quality (High/Medium/Low)</th> <th data-bbox="557 400 761 576">Importance and Rarity (High/Medium/Low)</th> <th data-bbox="761 400 965 576">Ability to accommodate change (High/Medium/Low)</th> <th data-bbox="965 400 1227 576">Significance of change in local and regional context (High/Medium/Low)</th> <th data-bbox="1227 400 1431 576">Maturity (High/Medium/Low)</th> <th data-bbox="1431 400 1637 576">Sensitivity (High/Medium/Low)</th> </tr> </thead> <tbody> <tr> <td data-bbox="353 576 557 639">Medium</td> <td data-bbox="557 576 761 639">Medium</td> <td data-bbox="761 576 965 639">High</td> <td data-bbox="965 576 1227 639">Low</td> <td data-bbox="1227 576 1431 639">Low</td> <td data-bbox="1431 576 1637 639">Medium</td> </tr> </tbody> </table>	Quality (High/Medium/Low)	Importance and Rarity (High/Medium/Low)	Ability to accommodate change (High/Medium/Low)	Significance of change in local and regional context (High/Medium/Low)	Maturity (High/Medium/Low)	Sensitivity (High/Medium/Low)	Medium	Medium	High	Low	Low	Medium	
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Medium	Medium	High	Low	Low	Medium									
LCA5	<p><u>Institutional Landscape</u></p> <p>This LCA is found along the foothill of Cham Shan, namely the Border District Police Headquarter, Sha Ling Livestock Waste Control Centre and San Uk Ling Holding Centre.</p> <p>This LCA is considered to have medium tolerance to change and moderate amenity value. Its sensitivity is therefore medium.</p> <table border="1" data-bbox="353 842 1637 1107"> <thead> <tr> <th data-bbox="353 842 557 1043">Quality (High/Medium/Low)</th> <th data-bbox="557 842 761 1043">Importance and Rarity (High/Medium/Low)</th> <th data-bbox="761 842 965 1043">Ability to accommodate change (High/Medium/Low)</th> <th data-bbox="965 842 1227 1043">Significance of change in local and regional context (High/Medium/Low)</th> <th data-bbox="1227 842 1431 1043">Maturity (High/Medium/Low)</th> <th data-bbox="1431 842 1637 1043">Sensitivity (High/Medium/Low)</th> </tr> </thead> <tbody> <tr> <td data-bbox="353 1043 557 1107">Medium</td> <td data-bbox="557 1043 761 1107">Medium</td> <td data-bbox="761 1043 965 1107">Medium</td> <td data-bbox="965 1043 1227 1107">Low</td> <td data-bbox="1227 1043 1431 1107">Medium</td> <td data-bbox="1431 1043 1637 1107">Medium</td> </tr> </tbody> </table>	Quality (High/Medium/Low)	Importance and Rarity (High/Medium/Low)	Ability to accommodate change (High/Medium/Low)	Significance of change in local and regional context (High/Medium/Low)	Maturity (High/Medium/Low)	Sensitivity (High/Medium/Low)	Medium	Medium	Medium	Low	Medium	Medium	Medium
Quality (High/Medium/Low)	Importance and Rarity (High/Medium/Low)	Ability to accommodate change (High/Medium/Low)	Significance of change in local and regional context (High/Medium/Low)	Maturity (High/Medium/Low)	Sensitivity (High/Medium/Low)									
Medium	Medium	Medium	Low	Medium	Medium									
LCA6	<p><u>Major Watercourse Corridor Landscape</u></p> <p>This LCA refers to modified watercourses channelized with concrete, stone or grasscrete and also includes some walkways along the watercourse and the vegetation associated with the watercourse, both within the channel and along the banks. Within the 500m buffer this LCA includes two short sections of the Shenzhen River and the Ng Tung River. The landscape amenity and significance of this LCA are medium. Due to its partially artificial state, it is relatively tolerant to change and its sensitivity is considered to be medium.</p>	Medium												

ID. No.	Landscape Resources / Landscape Characters						Sensitivity (Low, Medium, High)												
	Quality (High/Medium/Low)	Importance and Rarity (High/Medium/Low)	Ability to accommodate change (High/Medium/Low)	Significance of change in local and regional context (High/Medium/Low)	Maturity (High/Medium/Low)	Sensitivity (High/Medium/Low)													
	Low	Medium	High	Medium	Medium	Medium													
LCA7	<p><u>Rural Agricultural</u></p> <p>This LCA refers to land used for agriculture including crops and orchards as well as ornamental plant nurseries, it is generally found beyond southwest of the Project boundary. This LCA generally formed at plain rural area, with mixture of human activities.</p> <p>This LCA is predominantly mixture of natural and artificial. It is a significant LCA within the Study Area and has a medium tolerance to change. Therefore its sensitivity is considered to be medium.</p> <table border="1" data-bbox="353 836 1637 1075"> <thead> <tr> <th data-bbox="353 836 557 1011">Quality (High/Medium/Low)</th> <th data-bbox="557 836 761 1011">Importance and Rarity (High/Medium/Low)</th> <th data-bbox="761 836 965 1011">Ability to accommodate change (High/Medium/Low)</th> <th data-bbox="965 836 1229 1011">Significance of change in local and regional context (High/Medium/Low)</th> <th data-bbox="1229 836 1433 1011">Maturity (High/Medium/Low)</th> <th data-bbox="1433 836 1637 1011">Sensitivity (High/Medium/Low)</th> </tr> </thead> <tbody> <tr> <td data-bbox="353 1011 557 1075">Medium</td> <td data-bbox="557 1011 761 1075">Medium</td> <td data-bbox="761 1011 965 1075">Medium</td> <td data-bbox="965 1011 1229 1075">Medium</td> <td data-bbox="1229 1011 1433 1075">Medium</td> <td data-bbox="1433 1011 1637 1075">Medium</td> </tr> </tbody> </table>						Quality (High/Medium/Low)	Importance and Rarity (High/Medium/Low)	Ability to accommodate change (High/Medium/Low)	Significance of change in local and regional context (High/Medium/Low)	Maturity (High/Medium/Low)	Sensitivity (High/Medium/Low)	Medium	Medium	Medium	Medium	Medium	Medium	Medium
Quality (High/Medium/Low)	Importance and Rarity (High/Medium/Low)	Ability to accommodate change (High/Medium/Low)	Significance of change in local and regional context (High/Medium/Low)	Maturity (High/Medium/Low)	Sensitivity (High/Medium/Low)														
Medium	Medium	Medium	Medium	Medium	Medium														
<u>Siu Lam Barging Point</u>																			
It is considered that the existing landscape baseline study of the barging point at Siu Lam is the same as the baseline condition stated in the approved Expressed Rail Link EIA report (AEIAR-143/2009).																			

11.5.2 Tree Survey

- 11.5.2.1** To minimize conflicts with existing vegetation, a full tree survey within the works area has been undertaken in 2014 in accordance with DEVB TCW No. 07/2015, and the tree survey plan is given in **Appendix 11.1**.
- 11.5.2.2** For the area outside the works area but within the 500m assessment area, broad brush tree group survey has been undertaken that will not be directly affected by the proposed works. The broad brush tree group survey, corresponding photographs and layout plans are given in **Appendix 11.2**. For any inaccessible area case, broad brush tree group survey has been taken by the observation from the adjacent location.
- 11.5.2.3** Within the works area, all living trees with a stem diameter over 95mm measured at a point 1.3m above the ground level (hereafter referred to as the DBH) are included in the Tree Survey as defined in the Nature Conservation Practice Note No. 02 (Rev. June 2006) issued by Agriculture, Fisheries and Conservation Department (AFCD).
- 11.5.2.4** Approximately 2,700 nos. of individual trees are found within the works area. They were mainly in natural form, in which species *Lophostemon confertus* are dominant within the project boundary.

11.6 Visual Baseline Study

- 11.6.1.1** The Project is located in the north east New Territories, in a rural area bordering Mainland China and specifically Shenzhen City. HKSAR is divided from Shenzhen by the Shenzhen River which is wide in this area and has been channelized. There is little development currently in the area, apart from the Lo Wu Boundary Control Point, and Police Post at Man Kam To, as well as scattered rural villages. The area is largely contained by nearby hills such as Tai Shek Mo to the west, Cheung Po Tau in the north and Kong Nga Po to the east. To the north in stark contrast to HKSAR, lies the city of Shenzhen characterised by high rise modern buildings and is highly urban in nature. The high rise buildings here contain the view to the site from the north.
- 11.6.1.2** Visual envelope of the Project is bounded by the ridgeline from Tai Shek Mo to the west, Cham Shan to the south and Lo Shue Ling to the east. The Visual envelope and VSRs of the Project are illustrated in **Figure 11.4.1**. Representative photographs of each VSR are given in **Figures 11.5.1 to 11.5.4**. **Table 11.5** summarises the sensitivity assessment of each VSR group.

VSR R1

- 11.6.1.3** Refers to residents of a small number of villages and residencies along either side of Man Kam To Road. These residents are generally within vegetated areas and currently enjoy a good rural view. Given the natural topography of Sandy Ridge as well as this natural vegetation, some will not have views of the Project and those that do will only get partial views.

Given the nature of residential VSRs, this group is considered to have high sensitivity.

VSR R2

11.6.1.4 Refers to residents of San Uk Ling. These residents enjoy some good rural views but in the direction of the Project, have Man Kam To Road in the foreground with a lorry park up area. Sandy Ridge can be seen in the background with a partial view of the site and given the nature of residential VSRs, this group is considered to have high sensitivity.

VSR R3

11.6.1.5 Refers to residents of Lo Wu Village. These villagers actually face away from the main Project boundary, which is also blocked from their view by the natural topography of Sandy Ridge. There are trees within this village which partially block views from the houses and their existing view would take in Lo Wu Boundary Control Point in the background. Overall this VSR group is considered to have high sensitivity.

VSR R4

11.6.1.6 Refers to residents of Muk Wu. These residents enjoy some good rural views and in the direction of the Project, Sandy Ridge is visible as the green hill in the background. Their views towards the Project are distant and partial at best, but given the nature of residential VSRs, this group is considered to have high sensitivity overall.

VSR R5

11.6.1.7 Refers to residents of villages along Foothill of Tai Shek Mo. These residents are located along the foothill of Tai Shek Mo, and Sandy Ridge is visible as the green hill at the eastern side. Their views towards the Project are distant, and being blocked by the existing topography, but given the nature of residential VSRs, this group is considered to have high sensitivity.

VSR R6

11.6.1.8 Refers to residents of Muk Wu Nga Yiu. These residents enjoy good rural views and are located far away from the Project. Their views towards the site formation are distant but they are close to the Lin Ma Hang Road widening section. Given the nature of residential VSRs, this group is considered to have high sensitivity.

VSR GIC1

11.6.1.9 Refers to workers in the Border District Police Headquarters near at south of Man Kam To Road. These workers have a fairly contained outlook within the headquarters but from higher elevations of the buildings have good views north of Sandy Ridge with the occasional top of a high rise building in Shenzhen in the background. Their existing quality of view is good but they will only get partial views towards the Project. Overall this group of VSRs is considered to have medium sensitivity.

VSR GIC2

11.6.1.10 Refers to workers at Water Treatment Works near south of Sandy Ridge adjacent to the utility facilities along Man Kam To Road. These workers have limited view towards the proposed site. The workers will rarely have view outside due to its working space condition. Overall this group of VSRs is considered to have low sensitivity.

VSR GIC3

11.6.1.11 Refers to workers at Man Kam To Pumping Station adjacent to the western side of Man Kam To Boundary Control Point. These workers have limited and distant view towards the proposed site. The workers will rarely have view outside due to its working space condition. Overall this group of VSRs is considered to have low sensitivity.

VSR GIC4

11.6.1.12 Refers to workers in the Lo Wu Correctional Institution located at the foothill of Tai Shek Mo. These workers have a fairly contained outlook within their working area, they have views existing views of the dense vegetation and hillsides view of Tai Shek Mo. Their existing quality of view is good but they will only get glimpse views towards the Project. Overall this group of VSRs is considered to have medium sensitivity.

VSR T1

11.6.1.13 Refers to travellers on the East Rail Line. These viewers will only get occasional, glimpse views towards the site at best. Also considering the transient nature of this VSR group and the speed with which trains travel, it is considered to have low sensitivity.

VSR T2

11.6.1.14 Refers to travellers in public / private vehicles, travelling along Man Kam To Road. These viewers currently have fair rural views but traffic in general is travelling at a considerable speed and views to the main Project boundary would be occasional and glimpse at best. Views of the new Access Road would be full at the intersections but overall this group of VSRs is considered to have low sensitivity.

VSR II

11.6.1.15 Refers to workers at storage area along Man Kam To Road. These viewers currently have fair rural views towards the existing village's settings. In general the workers will rarely have views to the main Project boundary. Overall this group of VSRs is considered to have low sensitivity.

Siu Lam Barging Point

11.6.1.16 It is considered that the key VSRs and the visual baseline condition of barging point in Siu Lam are the same with the approved Expressed Rail Link EIA report (AEIAR-143/2009).

Table 11.5 Visually Sensitive Receivers and their sensitivity to change

VSR No.	VSR	Number of Individuals (Many/Medium/Few)	Quality of Existing View (Good/Fair/Poor)	Availability of Alternative Views (Yes/No)	Degree of Visibility (Full/Partial/Glimpse)	Duration of View (Long/Medium/Short)	Frequency of View (Frequent/Occasional/Rare)	Sensitivity to Change (Low, Medium, High)
R1	Residents of Villages along Man Kam To Road	Few	Good	Yes	Partial	Long	Frequent	High
R2	Residents of San Uk Ling	Few	Good	Yes	Partial	Long	Frequent	High
R3	Residents of Lo Wu Village	Few	Good	Yes	Glimpse	Long	Frequent	High
R4	Residents of Muk Wu	Few	Good	Yes	Partial	Long	Frequent	High
R5	Residents of Villages along Foothill of Tai Shek Mo	Few	Good	Yes	Glimpse	Long	Frequent	High
R6	Residents of Muk Wu Nga Yiu	Few	Good	Yes	Partial	Long	Frequent	High
GIC1	Workers in Border District Police Headquarters	Few	Good	Yes	Partial	Medium	Occasional	Medium
GIC2	Workers at Water Treatment Works	Few	Good	Yes	Glimpse	Medium	Rare	Low
GIC3	Workers at Man Kam To Pumping Station	Few	Good	Yes	Glimpse	Medium	Rare	Low
GIC4	Workers at Lo Wu Correctional Institution	Few	Good	Yes	Glimpse	Medium	Occasional	Medium
T1	Travellers along East Rail Line	Many	Fair	Yes	Partial	Short	Rare	Low
T2	Travellers along Man Kam To Road	Medium	Fair	Yes	Full	Short	Rare	Low
I1	Workers at Storage area along Man Kam To Road	Few	Fair	Yes	Glimpse	Medium	Rare	Low

Note: R = Residential; GIC = Government/Institution/Community, I = Industrials, T = Transport related

11.6.1.17 Figure 11.4.1 also shows the location of the Vantage Points (VPs) within the HKSAR, which will be used as points from which to make up photomontages to help illustrate the visual impact of the Project, and it has been incorporated in the report. The VPs are described as below:

- VP1 – Sha Ling Road: To represent the residential VSRs along Man Kam To Road, which is the closest residential VSR to the proposed development;
- VP2 – Man Kam To Road: To represent the residential VSRs along Man Kam To Road, which is the closest residential VSR to the proposed development;
- VP3 – San Uk Ling: To represent the residential VSRs along Man Kam To Road, which is the closest residential VSR to the proposed development;
- VP4 – MacIntosh Fort: To represent the view point for the overall view the proposed development;
- VP5 – Villages along foothill of Tai Shek Mo: To represent the VSR at the western side;
- VP6 – San Uk Ling: To represent the view point for the VSR adjacent to Lin Ma Hang road widening section; and
- VP7 – Residential area at the foothill of eastern side of Sandy Ridge: To represent the view point for the VSR, which will have the closest view towards proposed viaduct.

11.7 Impact Assessment

11.7.1 Impact Prediction

11.7.1.1 The Project will have various visual impacts during construction and operational phases. The proposed development will create varying levels of impact on the VSRs and visual amenity of the area at different stages of its lifetime as outlined below.

11.7.1.2 During the construction phase, potential landscape and visual impacts may arise from the site formation works and associated facilities.

Direct Impacts of Works

- site formation for the proposed C&C Facilities at Sandy Ridge Cemetery (including the proposed pick-up and drop-off area for shuttle buses);
- upgrading of Existing Sha Ling Road;
- construction of new road connecting Crematorium site and Man Kam To Road (a short viaduct section and a roundabout);
- construction of internal roads for C&C Facilities;
- associated geotechnical works for site formation and road network;

- construction of noise barriers along the improved Sha Ling Road;
- junction modification works for Man Kam To Road / Sha Ling Road;
- construction of new junction at Man Kam To Road for the new road connection to Crematorium site;
- construction of the pick-up and drop-off point at Man Kam To Road; and
- widening of Lin Ma Hang Road (from Man Kam To Road to Ping Yuen River) including the construction of noise barriers and the associated geotechnical works; and
- Barging point at Siu Lam.

Indirect Impacts of Works

- dust during dry weather, which will affect the planting health located adjacent to the construction site during construction period;
- after dark lighting and welding; and
- construction traffic.

Direct Impacts of works by other project(s) after the handover of platform

- construction of the Columbarium buildings and associated facilities with maximum height of 84mPD; and
- construction of the Crematorium buildings and associated facilities with maximum height of 74mPD.

11.7.1.3 During the operational phase, potential visual impacts would be related to the following:

- operation of new road and associates facilities.

11.7.1.4 Further mitigation measures may be proposed, as appropriate, to reduce potential landscape impacts of the Project. Mitigation measures follow the principles of first avoiding impacts by all means feasible, then reducing any unavoidable impacts to as low as practically possible and finally mitigating any remaining impacts.

11.7.1.5 A summary of the landscape impacts of the proposed works during construction phase is given in **Table 11.6**.

11.7.2 Landscape Impacts Before Mitigation

11.7.2.1 The Project will have various landscape impacts during construction and operation. The proposed development will create varying levels of impact on the LRs of the area as outlined below.

Table 11.6 Landscape impacts and its existing trees and protected plant species during construction of the proposed works during construction phase

ID No.	Landscape Resources/Landscape Character Areas	Source of Impact	Description of Impacts	Trees within Each LR (Dominant Species/Notes)	Precious or Protected Plant Species to be affected by the Project within Each LR	Approximate Quantity of Trees Affected by the Project within Each LR
LR1.1	Hillside Woodland Distribute at Valley	<p>Direct Impacts</p> <ul style="list-style-type: none"> site formation of land for proposed C&C Facilitates at Sandy Ridge; and associated geotechnical works for site formation and road network. <p>Indirect Impacts</p> <ul style="list-style-type: none"> dust during dry weather, which will affect the planting health located adjacent to the construction site during construction period 	<ul style="list-style-type: none"> a small portion of hillside woodland (approx. 0.8 ha) will be directly affected by the site formation platform and new formed slope; and the impacts are long term and the change is irreversible. 	<p><i>Celtis sinensis</i> 朴樹 <i>Acacia auriculiformis</i> 耳果相思 <i>Ficus hispida</i> 對葉榕 <i>Macaranga tanarius</i> var. <i>tomentosa</i> 血桐 <i>Lophostemon confertus</i> 紅膠木 <i>Clausena lansium</i> 黃皮 <i>Schefflera heptaphylla</i> 鴨腳木 <i>Cratoxylum cochinchinense</i> 黃牛木</p>	<ul style="list-style-type: none"> Nil 	Within Sandy Ridge site: 150 nos.
LR1.2	Hillside Woodland along toe of Upland	<p>Direct Impacts</p> <ul style="list-style-type: none"> upgrading of existing Sha Ling Road; and construction of new road connecting crematorium site and Man Kam To Road <p>Indirect Impacts</p> <ul style="list-style-type: none"> dust during dry weather, which will affect the planting health 	<ul style="list-style-type: none"> a portion of hillside woodland (approx. 0.27 ha) will be directly affected by the proposed roadwork; the impacts are long term and the change is irreversible. 	<p><i>Macaranga tanarius</i> var. <i>tomentosa</i> 血桐 <i>Ficus hispida</i> 對葉榕 <i>Celtis sinensis</i> 朴樹 <i>Cinnamomum camphora</i> 樟 <i>Schefflera heptaphylla</i> 鴨腳木</p>	<p>Tree: <i>Aquilaria sinensis</i> 1 no. <ul style="list-style-type: none"> 0.22m DBH growing on slope surface </p>	Within Sandy Ridge site: 365 nos. Lin Ma Hang Section: 45 nos.

ID No.	Landscape Resources/Landscape Character Areas	Source of Impact	Description of Impacts	Trees within Each LR (Dominant Species/Notes)	Precious or Protected Plant Species to be affected by the Project within Each LR	Approximate Quantity of Trees Affected by the Project within Each LR
		located adjacent to the construction site during construction period				
LR1.3	Exposed Uphill Woodland	<ul style="list-style-type: none"> • Nil 	<ul style="list-style-type: none"> • Nil 	<i>Acacia confuse</i> 台灣相思 <i>Dimocarpus longan</i> 龍眼 <i>Celtis sinensis</i> 朴樹 <i>Machilus pauhoi</i> 刨花潤楠	<ul style="list-style-type: none"> • Nil 	<ul style="list-style-type: none"> • Nil
LR2.1	Uphill Shrubby Grassland	<p>Direct Impacts</p> <ul style="list-style-type: none"> • site formation of land for proposed C&C Facilities at Sandy Ridge Cemetery; • upgrading of existing Sha Ling Road; and • associated geotechnical works for site formation and road network. <p>Indirect Impacts</p> <ul style="list-style-type: none"> • dust during dry weather, which will affect the planting health located adjacent to the construction site during construction period. 	<ul style="list-style-type: none"> • A large portion of grassland (approx. 13.4 ha) will be permanently affected due to the cutting on the hillside by site formation works; and • The impacts are long term and the change is irreversible.. 	<ul style="list-style-type: none"> • Nil 	<ul style="list-style-type: none"> • Nil 	<ul style="list-style-type: none"> • Nil

ID No.	Landscape Resources/Landscape Character Areas	Source of Impact	Description of Impacts	Trees within Each LR (Dominant Species/Notes)	Precious or Protected Plant Species to be affected by the Project within Each LR	Approximate Quantity of Trees Affected by the Project within Each LR
LR2.2	Foothill and Middle hill Shrubby Grassland	<p>Direct Impacts</p> <ul style="list-style-type: none"> • site formation of land for proposed C&C Facilities at Sandy Ridge Cemetery; • upgrading of existing Sha Ling Road; and • associated geotechnical works for site formation and road network. <p>Indirect Impacts</p> <ul style="list-style-type: none"> • dust during dry weather, which will affect the planting health located adjacent to the construction site during construction period. 	<ul style="list-style-type: none"> • A portion of grassland (approx. 1.8 ha) will be permanently affected due to the cutting on the hillside by site formation works; and • The impacts are long term and the change is irreversible. 	<ul style="list-style-type: none"> • Nil 	<p>Shrub:</p> <p><i>Arundina graminifolia</i></p> <p><i>Habenaria dentata</i></p>	<ul style="list-style-type: none"> • Nil
LR2.3	Crest Hill Shrubby Grassland	<ul style="list-style-type: none"> • Nil 	<ul style="list-style-type: none"> • Nil 	<ul style="list-style-type: none"> • Nil 	<ul style="list-style-type: none"> • Nil 	<ul style="list-style-type: none"> • Nil
LR3	Lowland Grassland	<p>Direct Impacts</p> <ul style="list-style-type: none"> • Widening of Lin Ma Hang Road (from Man Kam To Road to Ping Yuen River) including the construction of noise barriers and the associated geotechnical 	<ul style="list-style-type: none"> • a small portion of lowland grassland (approx. 0.02ha) will be affected by the road widening of Lin Ma Hang road; and • The scale of development is 	<ul style="list-style-type: none"> • Nil 	<ul style="list-style-type: none"> • Nil 	<ul style="list-style-type: none"> • Nil

ID No.	Landscape Resources/Landscape Character Areas	Source of Impact	Description of Impacts	Trees within Each LR (Dominant Species/Notes)	Precious or Protected Plant Species to be affected by the Project within Each LR	Approximate Quantity of Trees Affected by the Project within Each LR
		works. Indirect Impacts • dust during dry weather, which will affect the planting health located adjacent to the construction site during construction period	relatively small and the impact is permanent.			
LR4	Riverside Vegetation	• Nil	• Nil	<i>Acacia confusa</i> 台灣相思 <i>Acacia auriculiformis</i> 耳果相思 <i>Leucaena leucocephala</i> 銀合歡	• Nil	• Nil
LR5	Abandoned Fish Pond	• Nil	• Nil	• Nil	• Nil	• Nil
LR6	Rural Development	Direct Impacts • upgrading of existing Sha Ling Road; • construction of new road connecting Crematorium site and Man Kam To Road; and • widening of Lin Ma Hang Road. Indirect Impacts • dust during dry weather, which will affect the planting health	• small portion of this LR will be affected (approx. 0.5ha) by the roadwork. Existing local road will be upgraded; the edges of the rural development will be offset; and • dust will cause adverse impact to the surrounding.	<i>Bombax ceiba</i> 木棉 <i>Casuarina equisetifolia</i> 木麻黃 <i>Dimocarpus longan</i> 龍眼 <i>Macaranga tanarius var. tomentosa</i> 血桐 <i>Artocarpus macrocarpus</i> 波羅蜜	• Nil	Within Sandy Ridge site: 55 nos. Lin Ma Hang Section: 85 nos.

ID No.	Landscape Resources/Landscape Character Areas	Source of Impact	Description of Impacts	Trees within Each LR (Dominant Species/Notes)	Precious or Protected Plant Species to be affected by the Project within Each LR	Approximate Quantity of Trees Affected by the Project within Each LR
		located adjacent to the construction site during construction period.				
LR7	Marsh and Wetland	• Nil	• Nil	• Nil	• Nil	• Nil
LR8	Lowland Woodland	• Nil	• Nil	<i>Acacia confuse</i> 台灣相思 <i>Ficus hispida</i> 對葉榕 <i>Delonix regia</i> 鳳凰木 <i>Litchi chinensis</i> 荔枝 <i>Dimocarpus longan</i> 龍眼 <i>Melia azedarach</i> 苦楝	• Nil	• Nil
LR9	Wetland in Conservation Area	• Nil	• Nil	• Nil	• Nil	• Nil
LR10	MacIntosh Fort	• Nil	• Nil	• Nil	• Nil	• Nil
LR11	Agricultural Land	Indirect Impacts • dust during dry weather, which will affect the planting health located adjacent to the construction site during construction period.	• dust will cause adverse impact to the surrounding; and • The impact will be short term under construction phase.	<i>Leucaena leucocephala</i> 銀合歡 <i>Ficus hispida</i> 對葉榕 <i>Carica papaya</i> 番木瓜 <i>Psidium guajava</i> 番石榴 <i>Mangifera indica</i> 杧果 <i>Dimocarpus longan</i> 龍眼	• Nil	• Nil
LR12	Cemetery	• Nil	• Nil	<i>Bauhinia spp.</i> 洋蹄甲屬 <i>Morus alba</i> 桑 <i>Aleurites moluccana</i> 石栗	• Nil	• Nil

ID No.	Landscape Resources/Landscape Character Areas	Source of Impact	Description of Impacts	Trees within Each LR (Dominant Species/Notes)	Precious or Protected Plant Species to be affected by the Project within Each LR	Approximate Quantity of Trees Affected by the Project within Each LR
				<i>Lophostemon confertus</i> 紅膠木		
LR13	Vegetation at Engineered Slope	<ul style="list-style-type: none"> • Nil 	<ul style="list-style-type: none"> • Nil 	<ul style="list-style-type: none"> • Nil 	<ul style="list-style-type: none"> • Nil 	<ul style="list-style-type: none"> • Nil
LR14	Natural Water Stream	<p>Direct Impacts</p> <ul style="list-style-type: none"> • site formation of land for proposed C&C Facilities at Sandy Ridge; • upgrading of existing Sha Ling Road; • associated geotechnical works for site formation and road network; and • construction of new road connecting crematorium site and Man Kam To Road. 	<ul style="list-style-type: none"> • Some sections of natural water stream will be lost by the proposed Sha Ling roadworks and the western part of the proposed site formation platform. • Some sections of the natural water stream at the eastern side of Sandy Ridge will be spanned in part by a viaduct connecting the eastern platforms with the eastern connection road, and there would be associated shading effects. 	<ul style="list-style-type: none"> • Nil 	<ul style="list-style-type: none"> • Nil 	<ul style="list-style-type: none"> • Nil
LR15	Channelized River	<ul style="list-style-type: none"> • Nil 	<ul style="list-style-type: none"> • Nil 	<ul style="list-style-type: none"> • Nil 	<ul style="list-style-type: none"> • Nil 	<ul style="list-style-type: none"> • Nil
LR16	Transportation Corridor	<p>Direct Impacts</p> <ul style="list-style-type: none"> • upgrading of existing Sha Ling Road; and • widening of Lin Ma Hang Road (from Man Kam To Road to Ping Yuen River) including the 	<ul style="list-style-type: none"> • approx. 1400 m long of existing Lin Ma Hang road will be widening to support the traffic flow; and • the scale of development is medium and the impact is 	<ul style="list-style-type: none"> • Nil 	<ul style="list-style-type: none"> • Nil 	<ul style="list-style-type: none"> • Nil

ID No.	Landscape Resources/Landscape Character Areas	Source of Impact	Description of Impacts	Trees within Each LR (Dominant Species/Notes)	Precious or Protected Plant Species to be affected by the Project within Each LR	Approximate Quantity of Trees Affected by the Project within Each LR
		construction of noise barriers and the associated geotechnical works.	permanent.			
LR17	Vegetation along Utility Facilities	• Nil	• Nil	• Nil	• Nil	• Nil
LR18	Pumping Station	• Nil	• Nil	<i>Artocarpus heterophyllus</i> 菠蘿蜜 <i>Ficus microcarpa</i> 榕樹 <i>Khaya senegalensis</i> 非洲楝 <i>Roystonea regia</i> 大王椰子	• Nil	• Nil
LR19	Plantation	<p>Direct Impacts</p> <ul style="list-style-type: none"> • site formation of land for proposed C&C Facilities at Sandy Ridge Cemetery ; • upgrading of Existing Sha Ling Road • associated geotechnical works for site formation and road network • construction of new road connecting Crematorium site and Man Kam To Road <p>Indirect Impacts</p> <ul style="list-style-type: none"> • dust during dry weather, which will affect the planting health 	<ul style="list-style-type: none"> • A portion of hillside plantation (approx. 1.4 ha) will be directly affected by the proposed roadwork and site formation platform. • The impacts are long term and the change is irreversible. 	<i>Acacia auriculiformis</i> 耳果相思 <i>Ficus hispida</i> 對葉榕 <i>Macaranga tanarius</i> var. <i>tomentosa</i> 血桐 <i>Lophostemon confertus</i> 紅膠木 <i>Clausena lansium</i> 黃皮 <i>Schefflera heptaphylla</i> 鴨腳木	• Nil	Within Sandy Ridge site: 600 nos.

ID No.	Landscape Resources/Landscape Character Areas	Source of Impact	Description of Impacts	Trees within Each LR (Dominant Species/Notes)	Precious or Protected Plant Species to be affected by the Project within Each LR	Approximate Quantity of Trees Affected by the Project within Each LR
		located adjacent to the construction site during construction period				
LR20	Active Fish Pond	<ul style="list-style-type: none"> • Nil 	<ul style="list-style-type: none"> • Nil 	<ul style="list-style-type: none"> • Nil 	<ul style="list-style-type: none"> • Nil 	<ul style="list-style-type: none"> • Nil
LR21	Wet Woodland	<p>Indirect Impacts</p> <ul style="list-style-type: none"> • dust during dry weather, which will affect the planting health located adjacent to the construction site during construction period 	<ul style="list-style-type: none"> • the construction work might cause dust during dry weather which will affect the health of the plant. 	<i>Acronychia pedunculata</i> 山油柑	<ul style="list-style-type: none"> • Nil 	<ul style="list-style-type: none"> • Nil
LCA1	Upland and Hillside Landscape	<p>Direct Impacts</p> <ul style="list-style-type: none"> • site formation of land for proposed C&C Facilities at Sandy Ridge Cemetery; • upgrading of existing Sha Ling Road; • associated geotechnical works for site formation and road network; and • construction of new road connecting Crematorium site and Man Kam To Road. <p>Indirect Impacts</p> <ul style="list-style-type: none"> • dust during dry weather, which 	<ul style="list-style-type: none"> • a portion of upland (approx. 14.6ha) will be directly affected by site formation platform. The existing topography will be changed permanently by cut and fill site formation works; and • the impacts are long term and the change is irreversible. 	<ul style="list-style-type: none"> • N.A. 	<ul style="list-style-type: none"> • N.A. 	<ul style="list-style-type: none"> • N.A.

ID No.	Landscape Resources/Landscape Character Areas	Source of Impact	Description of Impacts	Trees within Each LR (Dominant Species/Notes)	Precious or Protected Plant Species to be affected by the Project within Each LR	Approximate Quantity of Trees Affected by the Project within Each LR
		will affect the planting health located adjacent to the construction site during construction period.				
LCA2	Rural Inland Plain Landscape	<p>Direct Impacts</p> <ul style="list-style-type: none"> • upgrading of existing Sha Ling Road; and • widening of Lin Ma Hang Road (from Man Kam To Road to Ping Yuen River) including the construction of noise barriers and the associated geotechnical works. <p>Indirect Impacts</p> <ul style="list-style-type: none"> • dust during dry weather, which will affect the planting health located adjacent to the construction site during construction period. 	<ul style="list-style-type: none"> • small portion (approx. 0.5ha) of this LCA will be affected by the road work; however, its overall setting of the landscape character will not have significant change. 	<ul style="list-style-type: none"> • N.A. 	<ul style="list-style-type: none"> • N.A. 	<ul style="list-style-type: none"> • N.A.
LCA3	Cemetery Landscape	<ul style="list-style-type: none"> • Nil 	<ul style="list-style-type: none"> • Nil 	<ul style="list-style-type: none"> • N.A. 	<ul style="list-style-type: none"> • N.A. 	<ul style="list-style-type: none"> • N.A.
LCA4	Major Transportation Corridor Landscape	<p>Direct Impacts</p> <ul style="list-style-type: none"> • widening of Lin Ma Hang Road (from Man Kam To Road to Ping Yuen River) including the 	<ul style="list-style-type: none"> • approx. 1400 m long of existing Lin Ma Hang transportation corridor will be widened. However, the generally landscape character and 	<ul style="list-style-type: none"> • N.A. 	<ul style="list-style-type: none"> • N.A. 	<ul style="list-style-type: none"> • N.A.

ID No.	Landscape Resources/Landscape Character Areas	Source of Impact	Description of Impacts	Trees within Each LR (Dominant Species/Notes)	Precious or Protected Plant Species to be affected by the Project within Each LR	Approximate Quantity of Trees Affected by the Project within Each LR
		construction of noise barriers and the associated geotechnical works.	formation of this LCA will not change.			
LCA5	Institutional Landscape	• Nil	• Nil	• N.A.	• N.A.	• N.A.
LCA6	Major Watercourse Corridor Landscape	• Nil	• Nil	• N.A.	• N.A.	• N.A.
LCA7	Rural Agricultural	• Nil	• Nil	• N.A.	• N.A.	• N.A.

Table 11.7 Magnitude of Impact of Landscape Resources and Landscape Character Areas

ID No.	Landscape Resources / Landscape Character Areas	Compatibility with the surrounding (Good/Fair/Poor)		Duration of Impact (Long/Medium/Short)		Scale of development (Large/Medium/Small)		Reversibility of change (Yes/No)		Magnitude of Impact (Large/Intermediate/Small/Negligible)	
		Const.	Oper.	Const.	Oper.	Const.	Oper.	Const.	Oper.	Const.	Oper.
LR1.1	Hillside Woodland Distribute at Valley	Poor	Poor	Medium	Long	Medium	Medium	No	No	Large	Large
LR1.2	Hillside Woodland along toe of Upland	Fair	Fair	Medium	Long	Medium	Small	No	No	Intermediate	Intermediate
LR1.3	Exposed Uphill Woodland	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Negligible	Negligible
LR2.1	Uphill Shrubby Grassland	Fair	Fair	Medium	Long	Large	Large	No	No	Large	Large
LR2.2	Foothill and Middle hill Shrubby Grassland	Fair	Fair	Medium	Long	Medium	Medium	No	No	Intermediate	Intermediate
LR2.3	Crest Hill Shrubby Grassland	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Negligible	Negligible
LR3	Lowland Grassland	Fair	Fair	Short	Long	Small	Small	No	No	Small	Small
LR4	Riverside Vegetation	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Negligible	Negligible
LR5	Abandoned Fish Pond	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Negligible	Negligible
LR6	Rural Development	Fair	Fair	Medium	Long	Small	Small	Yes	Yes	Small	Small
LR7	Marsh and Wetland	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Negligible	Negligible
LR8	Lowland Woodland	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Negligible	Negligible

ID No.	Landscape Resources / Landscape Character Areas	Compatibility with the surrounding (Good/Fair/Poor)		Duration of Impact (Long/Medium/Short)		Scale of development (Large/Medium/Small)		Reversibility of change (Yes/No)		Magnitude of Impact (Large/Intermediate/Small/Negligible)	
		Const.	Oper.	Const.	Oper.	Const.	Oper.	Const.	Oper.	Const.	Oper.
LR9	Wetland in Conservation Area	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Negligible	Negligible
LR10	MacIntosh Fort	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Negligible	Negligible
LR11	Agricultural Land	Fair	N/A	Short	N/A	Small	N/A	Yes	N/A	Small	Negligible
LR12	Cemetery	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Negligible	Negligible
LR13	Vegetation at Engineered Slope	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Negligible	Negligible
LR14	Natural Water Stream	Fair	Fair	Medium	Long	Small	Small	No	No	Small	Small
LR15	Channelized River	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Negligible	Negligible
LR16	Transportation Corridor	Good	Good	Medium	Long	Large	Large	Yes	Yes	Large	Large
LR17	Vegetation along Utility Facilities	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Negligible	Negligible
LR18	Pumping Station	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Negligible	Negligible
LR19	Plantation	Poor	Poor	Medium	Long	Large	Large	No	No	Large	Large
LR20	Active Fish Pond	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Negligible	Negligible
LR21	Wet Woodland	Fair	N/A	Short	N/A	Small	N/A	Yes	N/A	Small	Negligible

ID No.	Landscape Resources / Landscape Character Areas	Compatibility with the surrounding (Good/Fair/Poor)		Duration of Impact (Long/Medium/Short)		Scale of development (Large/Medium/Small)		Reversibility of change (Yes/No)		Magnitude of Impact (Large/Intermediate/Small/Negligible)	
		Const.	Oper.	Const.	Oper.	Const.	Oper.	Const.	Oper.	Const.	Oper.
LCA1	Upland and Hillside Landscape	Fair	Fair	Medium	Long	Large	Large	No	No	Large	Large
LCA2	Rural Inland Plain Landscape	Fair	Fair	Medium	Long	Small	Small	Yes	Yes	Small	Small
LCA3	Cemetery Landscape	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Negligible	Negligible
LCA4	Major Transportation Corridor Landscape	Good	Good	Medium	Long	Medium	Medium	Yes	Yes	Intermediate	Intermediate
LCA5	Institutional Landscape	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Negligible	Negligible
LCA6	Major Watercourse Corridor Landscape	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Negligible	Negligible
LCA7	Rural Agricultural	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Negligible	Negligible

Note: Const. = Construction, Oper. = Operation

11.7.3 Magnitude of Landscape Impact

- 11.7.3.1** Some landscape resources are located within the construction site. There will have large landscape impact on LR1.1, LR2.1, LR16, and LR19 due to the proposed site formation works and the road works. Large portion of landscape area and number of trees will be unavoidably affected within these LRs. They are mainly the landscape resources exist on the top hill of Sandy Ridge (refer to **Table 11.7**).
- 11.7.3.2** Landscape resources along the foothill of Sandy Ridge, such as LR1.2 and LR2.2 will have intermediate landscape impact. Most of them are not affected by the construction works, however, there are still some portion of area will be permanently affected and loss by the development.
- 11.7.3.3** The development works will affect the edge of some landscape resources, or its dust will bring adverse landscape impact to the plant health during construction, such as LR3, LR6, LR11, LR14, and LR21.
- 11.7.3.4** For landscape character areas, the site formation works will mainly affect the LCA1 Upland and Hillside Landscape due to some portion of its character will be permanently changed. LCA4 Major Transportation Corridor Landscape will have intermediate changes by the road widening of Sha Ling Road and Lin Ma Hang Road. Small portion of LCA2 Rural Inland Plain Landscape will be affect by the roadworks which have small impact.
- 11.7.3.5** Based on the broad-brush tree survey, approximately 2,700 existing trees are found within the works area. Approximately 1,400 of these existing trees can be retained, and 1,300 nos. of trees will be affected within the works area. Due to construction of the site formation and associates road widening works and footpath, the removal of the affected trees is considered. Affected trees with high to medium amenity value and high to medium survival rate are proposed to be transplanted as far as possible. Trees surveyed within the proposed works boundary are primarily common species. There are no LCSD Registered Old and Valuable Trees. Two mature trees and two rare species trees are found within the works area. For the two mature trees, one of them are unavoidably affected by the roadworks, and the other one will be retained. The two rare species trees will be relocated as far as technically feasible.
- 11.7.3.6** There are two number of *Aquilaria sinensis* (土沉香), which listed under the Protection of Endangered Species of Animals and Plants Ordinance (Cap. 586) are proposed to be relocated as far as technically feasible. One number of mature *Bombax ceiba* (木棉) found within the works area and will unavoidably be affected by the proposed new road and viaduct section. Since the alignment of proposed road and viaduct has considered the constraints of land resumption, engineering technical feasibility, existing topography, etc. the site formation layout and road alignment has been optimised.

11.7.4 Visual Impacts Before Mitigation

11.7.4.1 The changes to each VSR group's views during construction and operation are briefly described below and summarised in **Table 11.8**. Note that most of the Project will be shielded from VSRs in HKSAR by the natural topography of Sandy Ridge itself and hence the major earthworks involved for the site formation hardly affect these VSRs. The photomontages from VP4 (**Figure 11.7.4**) shows the indication of the worst case scenario for the future columbarium and crematorium building development works by others.

VSR R1

11.7.4.2 For the residents in this VSR group who will be able to see the Project, the main change will be due to the construction of the access road network, with the site formation and clearance required for this. The photomontages from VP1, VP2 and VP7 (**Figures 11.7.1, 11.7.2a, 11.7.2b and 11.7.7**) illustrate that the new access road will only cause a small change in view and overall magnitude of change is considered small during construction and operational phases.

VSR R2

11.7.4.3 The photomontage from VP3, indicates residents of San Uk Ling will hardly be affected by the Project, shielded from seeing it by a small green hill across Man Kam To Road (**Figure 11.7.3**). The main change in their view will be to see the small portion on tops of the upland will be formed as platform, and the road widening works of Lin Ma Hang Road. During construction and operational phases, the magnitude of change is small.

VSR R3

11.7.4.4 Views towards the proposed works from Residents of Lo Wu Village will be fully blocked by the existing landform of Sandy Ridge, the magnitude of change is considered as negligible during construction and operational phases.

VSR R4

11.7.4.5 Residents of Muk Wu will hardly be able to see any of the Project. The only change in their view will be the road widening works of Lin Ma Hang Road. During construction and operational phases, the magnitude of change is negligible.

VSR R5

11.7.4.6 The photomontage from VP5 (**Figure 11.7.5**), indicates residents of along the foothill of Tai Shek Mo will hardly be affected by the Project, shielded from seeing it by a small green hill across Man Kam To Road. During construction and operational phases, the magnitude of change is considered as negligible.

VSR R6

11.7.4.7 Residents of Muk Wu Nga Yiu will have partial view towards the proposed Lin Ma Hang Road. During construction and operational phases, the magnitude of change is considered as intermediate.

VSR GIC1

11.7.4.8 Workers of Border District Police Headquarter will hardly be able to see any of the Projects. Their view will be fully blocked by the existing vegetation. During construction and operational phases, the magnitude of change is negligible.

VSR GIC2

11.7.4.9 Workers of Water Treatment Works facilities will hardly be able to see any of the Projects. Their view will be fully blocked by the existing storage and rural setting. During construction and operational phases, the magnitude of change is negligible.

VSR GIC3

11.7.4.10 Workers of Man Kam To Pumping Station will hardly be able to see any of the Projects. Their view will be fully blocked by the existing vegetation and landform. During construction and operational phases, the magnitude of change is negligible.

VSR GIC4

11.7.4.11 Workers of Lo Wu Correctional Institution will hardly be able to see any of the Projects. Their view will be fully blocked by the existing vegetation and landform. During construction and operational phases, the magnitude of change is negligible.

VSR T1

11.7.4.12 Travellers on the East Rail Line may be able see the site clearance and formation works associated with the construction of the access road network, but most views will be shielded by natural topography and vegetation. It is considered the magnitude of change is negligible during construction and operational phase.

VSR T2

11.7.4.13 Travellers along Man Kam To Road will be affected by the construction of the new access road system and the associated site clearance and formation works. During operation phase, they will have good views of the new road connections but view of the site formation for the platform will be minimal as indicated in the photomontages from VP1 and VP2 (**Figures 11.7.1 and 11.7.2a & b**). Overall magnitude of change is small during construction and operational phases.

VSR T1

11.7.4.14 Workers at storage area along Man Kam To Road may be able see the site clearance and formation works associated with the construction of the access road network, however most views will be shielded by natural

topography and vegetation. Therefore, it is considered the magnitude of change is negligible during construction and operational phase.

Table 11.8 Magnitude of impacts on Visual Sensitive Receivers during construction and operational phases

VSR ID.	VSR	Approx. Distance, m	Compatibility (Good/Fair/Poor)	Potential Blockage of View (Full/Partial/Nil)		Duration of Impact (Temporary/Permanent)		Scale of the Project when viewed from the VSR (Small/Medium/Large)		Reversibility of Impact (Yes/Partial/No)		Magnitude of Change (Large/Intermediate/Small/Negligible)	
				Const.	Oper.	Const.	Oper.	Const.	Oper.	Const.	Oper.	Const.	Oper.
R1	Residents of villages along Man Kam To Road	5-10m	Fair	Partial	Partial	Temporary	Permanent	Medium	Medium	Partial	No	Small	Small
R2	Residents of San Uk ling	440m	Fair	Nil	Nil	Temporary	Permanent	Small	Small	Partial	No	Small	Small
R3	Residents of Lo Wu Village	430m	Fair	Nil	Nil	Temporary	Permanent	Small	Small	Partial	No	Negligible	Negligible
R4	Residents of Muk Wu	890m	Fair	Nil	Nil	Temporary	Permanent	Small	Small	Partial	No	Negligible	Negligible
R5	Residents of villages along Foothill of Tai Shek Mo	1100m	Fair	Nil	Nil	Temporary	Permanent	Small	Small	Partial	No	Negligible	Negligible
R6	Residents of Muk Wu Nga Yiu	1300m	Fair	Partial	Partial	Temporary	Permanent	Small	Small	Partial	No	Intermediate	Intermediate
GIC1	Works in Border District Police Headquarters	270m	Fair	Nil	Nil	Temporary	Permanent	Small	Small	Partial	No	Negligible	Negligible
GIC2	Workers at Water Treatment Works	960m	Fair	Nil	Nil	Temporary	Permanent	Small	Small	Partial	No	Negligible	Negligible
GIC3	Workers at Man Kam To Pumping Station	670m	Fair	Nil	Nil	Temporary	Permanent	Small	Small	Partial	No	Negligible	Negligible
GIC4	Workers at Lo Wu Correctional Institution	1600m	Fair	Nil	Nil	Temporary	Permanent	Small	Small	Partial	No	Negligible	Negligible

VSR ID.	VSR	Approx. Distance, m	Compatibility (Good/Fair/Poor)	Potential Blockage of View (Full/Partial/Nil)		Duration of Impact (Temporary/Permanent)		Scale of the Project when viewed from the VSR (Small/Medium/Large)		Reversibility of Impact (Yes/Partial/No)		Magnitude of Change (Large/Intermediate/Small/Negligible)	
				Const.	Oper.	Const.	Oper.	Const.	Oper.	Const.	Oper.	Const.	Oper.
T1	Travellers along East Rail Line	650m	Fair	Nil	Nil	Temporary	Permanent	Small	Small	Partial	No	Negligible	Negligible
T2	Travellers along Man Kam To Road	5-10m	Fair	Nil	Nil	Temporary	Permanent	Small	Small	Partial	No	Small	Small
I1	Workers at Storage Area along Man Kam To Road	700m	Fair	Nil	Nil	Temporary	Permanent	Small	Small	Partial	No	Negligible	Negligible

Note: R = Residential; GIC = Government/Institution/Community, I = Industrials, T = Transport related
Const. = Construction, Oper. = Operation

11.8 Proposed Mitigation Measures

- 11.8.1.1** The selection of site has carefully considered key constraints and tried to minimise impacts. The design of the works will also attempt to integrate the Project into the surroundings as far as possible given all constraints.
- 11.8.1.2** Mitigation measures follow the principles of first avoiding impacts by all means feasible, then reducing any unavoidable impacts to as low as practically possible and finally mitigating any remaining impacts.
- 11.8.1.3** The proposed landscape and visual mitigation measures for the works are listed in **Table 11.9**. Generally, all mitigation measures are to be implemented as early as possible and many of these mitigation measures perform multiple functions.

Table 11.9 Proposed mitigation measures for landscape and visual impacts

Mitigation No.	Mitigation Measure	Funding Agency	Implementation Agency	Management/ Maintenance Agency
CM1	The construction area and contractor's temporary works areas would be minimised to avoid impacts on adjacent landscape, and the reliance on off-site construction.	CEDD	CEDD	Nil
CM3*	Screening of construction works by hoardings/noise barriers around works area in visually unobtrusive colours and to screen construction works. It is proposed that screening be compatible with the surrounding environment and where possible, non-reflective, recessive colours be used. Hoarding should be taken down at the end of the construction period.	CEDD	CEDD / Contractor	Nil
CM4	Dust and Erosion Control for Exposed Soil - Excavation works and demolition of existing building blocks shall be well planned with precautions to suppress dust. Exposed soil shall be covered or watered often. Areas that are expected to be left with bare soil for a long period of time after excavation shall be properly covered with suitable protective fabric. Suitable drainage shall be provided around construction sites to avoid discharge of contaminants and sediments into sensitive water-based habitat.	Contractor	Contractor	Nil
CM5*	Control night-time lighting and glare by hooding all lights.	CEDD	Contractor	Nil

Mitigation No.	Mitigation Measure	Funding Agency	Implementation Agency	Management/ Maintenance Agency
CM6 ^(a)	Tree Protection and Preservation – Woodland, plantation and other vegetation within the Study Area will be protected and preserved as far as possible in accordance with ETWB TCW No. 29/2004 and DEVB TC(W) No. 07/2015. Detailed Design Considerations have considered avoiding impacts to trees, e.g. proper viaduct/ bridge design routing to avoid majority of the woodland, locating the columbarium buildings in areas with less trees and ensuring design of the buildings has as small a footprint as practical.	CEDD	CEDD / Consultant / Contractor	Contractor ^(c) / FEHD ^(d) / HyD ^(d) / LCSD ^(d)
CM7 ^(a)	Tree Transplantation – Tree(s) will affected ^(b) according to the Tree Preservation and Removal Proposal to be carried out in a later stage. Established trees of value are to be re-located where practically feasible.	CEDD	CEDD / Contractor	Contractor ^(c) / FEHD ^(d) / HyD ^(d) / LCSD ^(d)
CM8	Implementing precautionary control measures during construction stage accordingly to ETWB TCW No. 5/2005 – Protection of natural streams/rivers from adverse impacts arising from construction works to avoid direct or indirect impacts any watercourses and good site practices.	CEDD	CEDD / Contractor	Contractor ^(c) / FEHD ^(d) / HyD ^(d) / LCSD ^(d)
OM1 ^(f)	Compensatory Woodland Planting - The arrangement of compensatory planting (e.g. areas of woodland to be compensated and space to be allowed within the Project Site) will be subjected to detailed engineering design, landscape design and planting plan, and is recommended to be implemented prior to the construction activities as far as practical.	CEDD	CEDD / Contractor	Contractor ^(c) / FEHD ^(d) / HyD ^(d) / LCSD ^(d)

Mitigation No.	Mitigation Measure	Funding Agency	Implementation Agency	Management/ Maintenance Agency
OM2	Compensatory Tree Planting for Plantation and Other Vegetated Areas - Compensatory planting should be provided in accordance with DEVB TC(W) No. 07/2015 to compensate for those trees felled. According to the preliminary design, compensatory trees will be planted on the cut/fill slopes, along new roads and in car parks. The selection of planting species shall be made with reference to the species identified in the future Detailed Tree Survey and be native to Hong Kong or the South China region.	CEDD	CEDD / Contractor	Contractor ^(c) / FEHD ^(d) / HyD ^(d) / LCSD ^(d)
OM3	Amenity Planting and aesthetic streetscape design of hard landscaping for Pedestrian Walkway, Roadside - Roadside amenity planting should be provided along Sha Ling Road, Lin Ma Hang Road, as well as the internal road within Sandy Ridge columbarium and crematorium site; to enhance the landscape quality of the existing and proposed transport routes. Climbers are proposed to cover vertical, hard surfaces of the piers of the proposed viaducts, and also the newly formed retaining wall within the site. Shade tolerant plants will be planted, where light is sufficient, to improve aesthetic value of areas under viaducts.	CEDD	CEDD / Contractor	Contractor ^(c) / HyD ^(d) / LCSD ^(d)
OM4	Greening Works and Contour Grading Works on Cut/ Fill Slopes - Greening works such as hydroseeding/ terraces of shrub or tree planting will be provided where slope gradient allows, according to Geotechnical Engineering Office (GEO) Publication No.1/2011 Technical Guidelines on Landscape Treatment for Slopes.	CEDD	CEDD / Contractor	Contractors ^(c) / HyD ^(d) / LCSD ^(d) / FEHD ^(d)

Mitigation No.	Mitigation Measure	Funding Agency	Implementation Agency	Management/ Maintenance Agency
OM5 ^[e]	Landscape design treatment to be provided by relevant government department.	FEHD	FEHD / Contractor	Contractor ^(c) / FEHD ^(d) / HyD ^(d) / LCSD ^(d)
OM6*	Architectural and chromatic treatment of the hard architectural and engineering structures and facilities.	FEHD	FEHD / Contractor	Contractor ^(c) / FEHD ^(d) / HyD ^(d) / LCSD ^(d)
OM7*	Aesthetic design of the proposed noise barriers.	CEDD	CEDD / Contractor	Contractor ^(c) / HyD ^(d)
OM8	Silt traps should be incorporated into design of road gullies for the natural water stream(s).	CEDD	CEDD / Contractor	Contractor ^(c) / HyD ^(d)

Notes:

- (a) A detailed Tree Survey Report showing all identified valuable trees and OVT will be undertaken in a separate Tree Preservation and Removal Proposal.
- (b) Wood resulting from tree removal should be recycled as mulch or soil conditioner for re-use within the Project or in other projects as far as possible e.g. for the construction of soft landscape work, were practical.
- (c) Contractor is responsible for landscaping during the agreed establishment and maintenance period. Other designated management and maintenance agents to take up maintenance and management of landscaping after end of agreed period.
- (d) Highways Department (HyD) is responsible for maintenance and management of landscaping of public road side slope, Leisure and Cultural Services Department (LCSD) is responsible for the management and maintenance of soft landscapes along non-expressway public roads outside Country Park and Food and Environmental Hygiene Department (FEHD) is responsible for maintenance and management of landscaping of other areas allocated to FEHD.
- (e) The landscape mitigation treatment of the future development site shall follow the below frameworks:
- Buffer planting shall be provided to soften the edge of the site.
 - Aesthetic landscape treatment including both soft and hard landscape features shall be provided.
 - Vertical greening shall be provided as far as practicable.
 - At-grade tree planting shall be provided as far as possible while planting space is allowed, to enhance the overall environment.
 - Architectural design shall blend in with the surrounding environment.
 - Overall greening ratio shall comply with TC(W) No.3/2012 Site coverage of Greenery for Government Building Projects.
- (f) The compensatory woodland planting shall be included woodland mixed whips, seeding, and shrubs. The principle of the location shall be the extension of the existing woodland, as well as the original lost woodland location. The proposal will be agreed with AFCD, the woodland enhancement planting shall refer to **Chapter 9.**

* These mitigation measures are principally used to reduce the significance of visual impacts although some, such as the green roof and vertical greening, will contribute to the overall landscaping of the Project.

- 11.8.1.4** The master landscape plans show the preliminary soft landscape treatment is shown in **Figures 11.6.1a** and **11.6.2**. For the assessment of visual impacts that would be caused by future developments under other project scopes, **Figure 11.6.1a** represents the worst case scenario of the future columbarium and crematorium building development by others. The Photomontages of the proposed project without and with mitigation measures at Day 1 and Year 10, illustrating the appearance of the proposed works, and the locations of viewpoints are shown in **Figure 11.4.1**.
- 11.8.1.5** The proposed landscape treatment of the slope and retaining wall are shown in **Figure 11.6.3**, where the landscape mitigation measures of the viaducts and retaining wall are shown in **Figures 11.6.4** and **11.6.6** respectively. In addition, the indicative section of future columbarium buildings is shown in **Figure 11.6.5**.
- 11.8.1.6** The compensatory woodland planting shall be in woodland mixed shrubs, seeding, and whips. The principle of the location shall be the extension of the existing woodland, as well as the original lost woodland location. Woodland mixed species such as *Machilus pauhoi*, *Cratoxylum cochinchinense*, *Litsea rotundifolia* var. *oblongifolia*, *Cinnamomum camphora*, *Daphniphyllum calycinum*, *Bridelia tomentosa*, *Phyllanthus emblica* shall be proposed.
- 11.8.1.7** Species proposed for woodland planting shall be pioneer native tree and shrub species often present in natural woodlands in Hong Kong.
- 11.8.1.8** Woodland planting shall be scheduled to be undertaken in two Phases. For Phase 1, more tolerant of exposed areas and the consequent effect of sunlight, wind and drying out of soils shall be planted. For Phase 2, the remaining that are likely to establish more successfully once woody cover is present and available to provide shade and shelter and to buffer changes in soil moisture level shall be planted. Thus, Phase 1 planting will improve the existing microclimate condition at the beginning for Phase 2 planting.
- 11.8.1.9** 20m fire protection zone will be proposed along the edge of compensatory woodland which is adjacent to human activities and existing villages. *Acacia confusa* (台灣相思) will be planted in this buffer zone as a shelterbelt and therefore serve as a firebreak and will also be beneficial as a nitrogen fixer.
- 11.8.1.10** It is considered that the mitigation measures below shall be applied on the proposed barging point at Siu Lam to avoid and reduce the landscape and visual impact:
- Tree Protection and Preservation – Woodland, plantation and other vegetation within the Study Area will be protected and preserved as far as possible in accordance with ETWB TCW No. 29/2004 and DEVB TC(W) No.07/2015. Detailed Design Considerations have considered avoiding impacts to trees, e.g. proper viaduct/ bridge design routing to avoid majority of the woodland, locating the

columbarium buildings in areas with less trees and ensuring design of the buildings has as small a footprint as practical; and

- Reinstatement of disturbed areas to match adjacent area or to condition to suit future landuse.

11.8.2 Prediction of Significant of Landscape Impact

11.8.2.1 The potential significance of the landscape impacts during the construction and operational phases, before and after mitigation, is provided in **Table 11.10**. This assessment follows the proposed methodology and assumes that the appropriate design measures incorporated in the development layout and the mitigation measures identified in **Table 11.9** would be implemented and that the full effect of the soft landscape mitigation measures would be realized after 10 years. Cumulative impact during construction and operational phases of the Sandy Ridge site formation works and associated infrastructural works, and all concurrent projects within the assessment area on landscape resources and landscape character areas are described below.

Table 11.10 Significance threshold of residual impact before and after mitigation: Operation Day 1 and Year 10 (Note: All impacts are Adverse unless otherwise noted as Beneficial)

No.	Landscape Resources/Landscape Character Areas	Sensitivity (Low, Medium, High)	Magnitude of Change (Negligible/Small/Intermediate/Large)		Impact Significance Threshold BEFORE Mitigation (Insubstantial/Slight/Moderate/Substantial)		Recommended Mitigation Measures	Residual Impact Significance Threshold After Mitigation (Insubstantial/Slight/Moderate/Substantial)		
			Construction	Operation	Construction	Operation		Construction	Operation	
									Day 1	Year 10
Landscape Resources										
LR1	Hillside Woodland									
LR1.1	Hillside Woodland Distribute at Valley	High	Large	Large	Substantial	Substantial	CM1, CM6, CM7, OM1, OM2, OM3, OM4, OM5, OM6	Substantial	Moderate	Slight
LR1.2	Hillside Woodland Distribute along the toe of Upland	High	Intermediate	Intermediate	Moderate	Moderate	CM1, CM6, CM7, OM1, OM2, OM3, OM4	Moderate	Moderate	Slight
LR1.3	Exposed Uphill Woodland	High	Negligible	Negligible	Insubstantial	Insubstantial	Not required	Insubstantial	Insubstantial	Insubstantial
LR2	Hillside Shrubby Grassland									
LR2.1	Uphill Shrubby Grassland	Medium	Large	Large	Substantial	Substantial	CM1, OM1, OM3, OM4, OM5, OM6	Substantial	Moderate	Slight
LR2.2	Foothill and Middle hill Shrubby Grassland	Medium	Intermediate	Intermediate	Moderate	Moderate	CM1, OM1, OM3, OM4, OM5	Moderate	Slight	Slight
LR2.3	Crest Hill Shrubby Grassland	Medium	Negligible	Negligible	Insubstantial	Insubstantial	Not required	Insubstantial	Insubstantial	Insubstantial
LR3	Lowland Grassland	Medium	Small	Small	Slight	Slight	CM1, OM1,	Slight	Insubstantial	Insubstantial

No.	Landscape Resources/Landscape Character Areas	Sensitivity (Low, Medium, High)	Magnitude of Change (Negligible/Small/Intermediate/Large)		Impact Significance Threshold BEFORE Mitigation (Insubstantial/Slight/Moderate/Substantial)		Recommended Mitigation Measures	Residual Impact Significance Threshold After Mitigation (Insubstantial/Slight/Moderate/Substantial)		
			Construction	Operation	Construction	Operation		Construction	Operation	
									Day 1	Year 10
							OM3, OM4, OM5			
LR4	Riverside Vegetation	Medium	Negligible	Negligible	Insubstantial	Insubstantial	Not required	Insubstantial	Insubstantial	Insubstantial
LR5	Abandoned Fish Pond	Medium	Negligible	Negligible	Insubstantial	Insubstantial	Not required	Insubstantial	Insubstantial	Insubstantial
LR6	Rural Development	Medium	Small	Small	Slight	Slight	CM1, CM6, CM7, OM3	Slight	Insubstantial	Insubstantial
LR7	Marsh and Wetland	Medium	Negligible	Negligible	Insubstantial	Insubstantial	Not required	Insubstantial	Insubstantial	Insubstantial
LR8	Lowland Woodland	High	Negligible	Negligible	Insubstantial	Insubstantial	Not required	Insubstantial	Insubstantial	Insubstantial
LR9	Wetland in Conservation Area	High	Negligible	Negligible	Insubstantial	Insubstantial	Not required	Insubstantial	Insubstantial	Insubstantial
LR10	MacIntosh Fort	High	Negligible	Negligible	Insubstantial	Insubstantial	Not required	Insubstantial	Insubstantial	Insubstantial
LR11	Agricultural Land	Medium	Small	Negligible	Slight	Insubstantial	CM1, CM4	Slight	Insubstantial	Insubstantial
LR12	Cemetery	Medium	Negligible	Negligible	Insubstantial	Insubstantial	Not required	Insubstantial	Insubstantial	Insubstantial
LR13	Vegetation at Engineered Slope	Low	Negligible	Negligible	Insubstantial	Insubstantial	Not required	Insubstantial	Insubstantial	Insubstantial
LR14	Natural Water Stream	High	Small	Small	Slight	Slight	CM1, CM4, CM8, OM8	Slight	Insubstantial	Insubstantial
LR15	Channelized River	Medium	Negligible	Negligible	Insubstantial	Insubstantial	Not required	Insubstantial	Insubstantial	Insubstantial
LR16	Transportation Corridor	Low	Large	Large	Moderate	Moderate	CM6, CM7, OM2, OM3	Moderate	Slight	Insubstantial
LR17	Vegetation along Utility	Low	Negligible	Negligible	Insubstantial	Insubstantial	Not required	Insubstantial	Insubstantial	Insubstantial

No.	Landscape Resources/Landscape Character Areas	Sensitivity (Low, Medium, High)	Magnitude of Change (Negligible/Small/Intermediate/Large)		Impact Significance Threshold BEFORE Mitigation (Insubstantial/Slight/Moderate/Substantial)		Recommended Mitigation Measures	Residual Impact Significance Threshold After Mitigation (Insubstantial/Slight/Moderate/Substantial)		
			Construction	Operation	Construction	Operation		Construction	Operation	
									Day 1	Year 10
	Facilities									
LR18	Pumping Station	Low	Negligible	Negligible	Insubstantial	Insubstantial	Not required	Insubstantial	Insubstantial	Insubstantial
LR19	Plantation	Medium	Large	Large	Substantial	Substantial	CM6, CM7, OM2, OM3	Substantial	Moderate	Slight
LR20	Active Fish Pond	High	Negligible	Negligible	Insubstantial	Insubstantial	Not required	Insubstantial	Insubstantial	Insubstantial
LR21	Wet Woodland	High	Small	Negligible	Moderate	Insubstantial	CM1, CM4, CM8, OM8	Slight	Insubstantial	Insubstantial
Landscape Character Areas										
LCA1	Upland and Hillside Landscape within Sandy Ridge Development Site	High	Large	Large	Substantial	Substantial	CM1, CM6, CM7, OM1, OM2, OM3, OM4, OM5	Substantial	Moderate	Slight
LCA2	Rural Inland Plain Landscape	Medium	Small	Small	Slight	Slight	CM1, OM1, OM3, OM4, OM5	Slight	Insubstantial	Insubstantial
LCA3	Cemetery Landscape	Medium	Negligible	Negligible	Insubstantial	Insubstantial	Not required	Insubstantial	Insubstantial	Insubstantial
LCA4	Major Transportation Corridor Landscape	Medium	Intermediate	Intermediate	Moderate	Moderate	CM6, CM7, OM2, OM3	Moderate	Slight	Insubstantial
LCA5	Institutional Landscape	Medium	Negligible	Negligible	Insubstantial	Insubstantial	Not required	Insubstantial	Insubstantial	Insubstantial
LCA6	Major Watercourse Corridor Landscape	Medium	Negligible	Negligible	Insubstantial	Insubstantial	Not required	Insubstantial	Insubstantial	Insubstantial

No.	Landscape Resources/Landscape Character Areas	Sensitivity (Low, Medium, High)	Magnitude of Change (Negligible/Small/Intermediate/Large)		Impact Significance Threshold BEFORE Mitigation (Insubstantial/Slight/Moderate/Substantial)		Recommended Mitigation Measures	Residual Impact Significance Threshold After Mitigation (Insubstantial/Slight/Moderate/Substantial)		
			Construction	Operation	Construction	Operation		Construction	Operation	
									Day 1	Year 10
LCA7	Rural Agricultural	Medium	Negligible	Negligible	Insubstantial	Insubstantial	Not required	Insubstantial	Insubstantial	Insubstantial

11.8.3 Prediction of Significant of Visual Impact

11.8.3.1 The potential significance of the visual impacts during the construction and operational phases, before and after mitigation, is provided in **Table 11.11**. This assessment follows the proposed methodology and assumes that the appropriate design measures incorporated in the development layout and the mitigation measures identified in **Table 11.9** would be implemented and that the full effect of the mitigation measures would be realized after 10 years. Cumulative impact during construction and operational phases of Sandy Ridge site formation works and associated infrastructural works, and all concurrent projects within the assessment area visually sensitive receivers are described below.

Table 11.11 Significance of visual impacts during construction and operational phases (Note: All impacts are Adverse unless otherwise noted with Beneficial)

No.	Visual Sensitive Receiver	Sensitivity (Low, Medium, High)	Magnitude of Change (Negligible/Small/Intermediate/Large)		Impact Significance Threshold Before Mitigation (Insubstantial/Slight/Moderate/Substantial)		Recommended Mitigation Measures	Residual Impact Significance Threshold After Mitigation (Insubstantial/Slight/Moderate/Substantial)		
			Construction	Operation	Construction	Operation		Construction	Operation	
									Day 1	Year 10
R1	Residents of villages along Man Kam To Road	High	Small	Small	Moderate	Moderate	CM1, CM3, CM5, OM3, OM4, OM5, OM6, OM7	Moderate	Slight	Slight
R2	Residents of San Uk ling	High	Small	Small	Moderate	Moderate	CM1, CM3, CM5, OM3, OM4, OM5, OM6, OM7	Moderate	Slight	Insubstantial
R3	Residents of Lo Wu Village	High	Negligible	Negligible	Insubstantial	Insubstantial	Not required	Insubstantial	Insubstantial	Insubstantial
R4	Residents of Muk Wu	High	Negligible	Negligible	Insubstantial	Insubstantial	Not required	Insubstantial	Insubstantial	Insubstantial
R5	Residents of villages along Foothill of Tai Shek Mo	High	Negligible	Negligible	Insubstantial	Insubstantial	Not required	Insubstantial	Insubstantial	Insubstantial
R6	Residents of Muk Wu Nga Yiu	High	Intermediate	Intermediate	Moderate	Moderate	CM3, CM5, OM3, OM5, OM6, OM7	Moderate	Slight	Insubstantial

No.	Visual Sensitive Receiver	Sensitivity (Low, Medium, High)	Magnitude of Change (Negligible/Small/Intermediate/Large)		Impact Significance Threshold Before Mitigation (Insubstantial/Slight/Moderate/Substantial)		Recommended Mitigation Measures	Residual Impact Significance Threshold After Mitigation (Insubstantial/Slight/Moderate/Substantial)		
			Construction	Operation	Construction	Operation		Construction	Operation	
									Day 1	Year 10
GIC1	Works in Border District Police Headquarters	Medium	Negligible	Negligible	Insubstantial	Insubstantial	Not required	Insubstantial	Insubstantial	Insubstantial
GIC2	Workers at Water Treatment Works	Low	Negligible	Negligible	Insubstantial	Insubstantial	Not required	Insubstantial	Insubstantial	Insubstantial
GIC3	Workers at Man Kam To Pumping Station	Low	Negligible	Negligible	Insubstantial	Insubstantial	Not required	Insubstantial	Insubstantial	Insubstantial
GIC4	Workers at Lo Wu Correctional Institution	Medium	Negligible	Negligible	Insubstantial	Insubstantial	Not required	Insubstantial	Insubstantial	Insubstantial
T1	Travellers along East Rail Line	Low	Negligible	Negligible	Insubstantial	Insubstantial	Not required	Insubstantial	Insubstantial	Insubstantial
T2	Travellers along Man Kam To Road	Low	Small	Small	Slight	Slight	CM3, CM5, OM3, OM5, OM6, OM7	Slight	Insubstantial	Insubstantial
I1	Workers at Storage Area along Man Kam To Road	Low	Negligible	Negligible	Insubstantial	Insubstantial	Not required	Insubstantial	Insubstantial	Insubstantial

*Note: R = Residential; GIC = Government/Institution/Community, I = Industrials, T = Transport related

11.9 Residual Impacts

11.9.1 Residual Landscape Impact During Construction Phase

11.9.1.1 Based on the tree survey report, approximately 1,300 nos. of trees will be affected within the works area, of which approximately 1,100 nos. will be affected within Sandy Ridge Project boundary, and approximately 200 nos. trees will be affected along Lin Ma Hang Road widening. They are mostly tree group at the foothill and roadside trees planting.

11.9.1.2 Trees surveyed within the proposed works area are primarily common species. There are no LCSD Registered Old and Valuable Trees. Two mature trees with larger than 1m DBH found within the works area, they are 2 nos. of *Bombax ceiba* (木棉) located in LR1.1 and LR6 respectively. In addition, 1 no. of mature *Ficus elastic* (印度榕) located in LR6 which found outside the works area. All the found mature trees are common species in Hong Kong and in fair to poor amenity value. For the two mature trees within the works area, which 1 no. of *Bombax ceiba* (木棉) will be affected by the proposed Sha Ling Road widening and required to be felled unavoidably. There are two number of *Aquilaria sinensis* (土沉香) located in LR1.1 and LR1.2 respectively, which is listed under the Protection of Endangered Species of Animals and Plants Ordinance (Cap. 586), found within the works area and unavoidably to be affected by the proposed new road and viaduct section, which are proposed to be relocated as far as technically feasible. The proposed works design has been optimised and minimised on affecting existing trees as far as feasible, any affected trees will be studied on its technical feasibility on the transplanting.

11.9.1.3 The alignment of Sha Ling Road has already be optimized. The columbarium site is composed of platforms at +50mPD and two EVAs which have been carefully designed based on the constraints of natural topography, locations of graves and woodland. There is a constraint that the PDA at +50mPD would require an access directly from Sha Ling Road at the same level. Therefore, at this area, Sha Ling Road would need to attain a level of +50mPD.

11.9.1.4 On the other hand, since there are private lots in the existing Sha Ling Village near Man Kam To Road, the existing run-in has to be maintained as access to these lots and thus the road profile of this section of Sha Ling Road from +12.3mPD to +20mPD has to be kept unchanged. After attaining the level of +20mPD, Sha Ling Road has to be risen to a level of +50mPD for an elevation difference of 30m within a horizontal distance of about 430m in order to access the platform of PDA. This means this section of Sha Ling Road could only be constructed to a gradient of about 7.5%. Based upon the above constraints and with the consideration of minimizing the Cut and Fill volume, the alignment of Sha Ling Road has been optimized.

- 11.9.1.5** In accordance with DEVB TCW No. 07/2015, the proposed compensatory planting proposal should be of a ratio not less than 1:1 in terms of quantity within the site and off-site as far as possible. For the proposed trees to be felled, heavy standard trees with trunk diameter from 75mm to 150mm (as specified in the Clause 3.15 of General Specification of Civil Engineering Works 2006) will be adopted for compensatory planting along Lin Ma Hang Road section, and some portion of the roadside planting within Sandy Ridge, light standard trees and whips planting will be proposed on the slope with gradient less than 35 degree.
- 11.9.1.6** A limited planting space is available for tree compensation, it is considered that creating addition planting area for compensatory tree planting will cause larger site formation area, and thus it will affect more existing trees and natural vegetation.
- 11.9.1.7** Compensatory woodland planting will be proposed along the hillsides to compensate the loss of existing woodland and enhance greenery. Woodland mix species whips shall be planted at the selected grassland, planting will be undertaken at 1.5m centres in staggered rows. Approximately 16,000 nos. of whips will be planted along the hillsides to create the woodland.
- 11.9.1.8** Cumulative impact on existing trees is summarized in **Table 11.7**, and tree survey plan is shown in **Appendix 11.1**.
- 11.9.1.9** Detailed tree preservation, transplanting and felling including compensatory planting proposals shall be submitted to relevant government departments for approval in accordance with DEVB TCW No. 07/2015.
- 11.9.1.10** There will be substantial impact on LR1.1 Hillside Woodland Distribute at Valley, LR2.1 Uphill Shrubby Grassland and LR19 Plantation in construction phase due to the amount of affected trees along the upgrading of Sha Ling Road, and also because a portion of hillside woodland at the eastern side of the site will be affected by the proposed road and viaduct. Mitigation measures such as minimization of the construction area will be applied in construction phase. Further mitigation measures such as grass planting and landscape design treatment on the future development, as well as woodland compensation will be provided in operational phase to reduce such landscape impact.
- 11.9.1.11** There will be moderate impact on LR1.2 Hillside Woodland along toe of Upland, LR2.2 Foothill and Middle hill Shrubby Grassland and LR16 Transportatin Corridor in construction phase due to the amount of affected trees along the upgrading of Sha Ling Road, and also because a portion of hillside woodland at the western side of the site will be affected by the proposed road and viaduct. Mitigation measures such as tree protection and minimize the construction area will be applied in construction phase. The landscape impact will be further reduced during operation phase when the proposed trees grown in mature size.

- 11.9.1.12** There will be moderate indirect impact on LR21 Wet Woodland in construction phase due to their close location are close to the proposed construction works. Dust might cause adverse impact during construction phase, however, such impact will be reduced to slight after mitigation measures are applied.
- 11.9.1.13** There will be slight impact on LR3 Lowland Grassland, LR6 Rural Development and LR14 Natural Water Stream in construction phase due to small portion of these LRs will be affected by the construction works of the site formation works and road widening of Lin Ma Hang Road and Sha Ling Road. The area adjacent to these two roads will be setback due to the works.
- 11.9.1.14** There will be slight indirect impact on LR11 Agricultural Land in construction phase due to their close location to the proposed construction works. Dust during dry weather, which will affect the planting health located adjacent to the construction site during construction period, might cause adverse impact during construction phase, however, such impact will be reduced to insubstantial after mitigation measures, are applied.
- 11.9.1.15** There will be substantial impact on LCA1 Upland and Hillside Landscape in construction phase due to the significant changes on the existing topography by the proposed site formation works for the platform. The natural terrain will be formed into four major plain platform and associates cut and filled slopes. Mitigation measures such as tree protection and minimize the construction area will be applied in the construction phase. Further mitigation measures such as grass planting will be provided in operation phase to reduce such landscape impact..
- 11.9.1.16** There will be slight impact on LCA2 Rural Inland Plain Landscape in construction phase as due to the proposed two entrances along Man Kam To Road towards Sandy Ridge site will slightly change the rural setting. The area adjacent to these two roads will be setback due to the works.
- 11.9.1.17** There will have moderate impact on LCA4 Major Transportation Corridor Landscape in construction phase due to the upgrading and road widening works along existing Sha Ling Road and Lin Ma Hang Road (from Man Kam To Road to Ping Yuen River).
- 11.9.1.18** The residual impact on other LRs and LCAs will be insubstantial during construction phase.

11.9.2 Residual Landscape Impact in Operation Phase

- 11.9.2.1** Residual impact on landscape resources and landscape character areas are shown in **Table 11.10**.
- 11.9.2.2** LR1.1 – There is substantial impact on Natural Hillside Woodland within Sandy Ridge due to the loss of some existing trees along the proposed roadwork and for the site formation. Mitigation measures shall

be applied. Compensatory trees and landscape amenity treatment on the future development will mitigate the lost of greenery and blend in the proposed development with the natural surroundings. Woodland mixed whips planting shall be proposed to create a natural woodland in the long term operation phase. Appropriate greenery measures will be applied on the proposed cut and filled slope. It is considered that the residual impact can be reduced to moderate after all mitigation measures are applied, and it will further reduce to slight after the compensatory woodland is applied and matured at Year 10.

- 11.9.2.3** LR1.2 – There is moderate impact on Hillside Woodland along toe of Upland due to the loss of small portion of woodland at the foothill by the proposed roadworks. It is considered that the residual impact is expected to be reduced to moderate after mitigation measures of hydroseeding applied and roadside planting at Day 1 operation and slight after the planting become mature in Year 10 operation.
- 11.9.2.4** LR1.3 – There will be insubstantial impact on Exposed Uphill Woodland as this LR is relatively far away from the works and will not be affected in operational phase.
- 11.9.2.5** LR2.1 – There is substantial impact on Hillside Shrubby Grassland due to the loss of large portion of grassland for the site formation works. It is considered that the residual impact is expected to be reduced to moderate after mitigation measures of hydroseeding applied at Day 1 operation and slight after all of the landscaping design treatment on the future development applied in Year 10 operation.
- 11.9.2.6** LR2.2 – There is moderate impact on Foothill and Middle hill Shrubby Grassland due to the loss of some portion of grassland by the proposed road works and slope works. It is considered that the residual impact is expected to be reduced to slight after mitigation measures of slope greening treatment applied at Day 1 and in Year 10 operation.
- 11.9.2.7** LR2.3 – It will be subject to insubstantial impact on Crest Hill Shrubby Grassland due to this LR is relatively far away from the works and will not be affected in operational phase.
- 11.9.2.8** LR3 – There is some minor impact on Lowland Grassland during the construction of Lin Ma Hang Road widening. It is considered that the residual impact is expected to be reduced as insubstantial after mitigation measures applied along the roadsides of Lin Ma Hang Road in Year 10 operation.
- 11.9.2.9** LR4 – Riverside Vegetation will be subject to insubstantial impact as this LR is relatively far away from the works and will not be affected in operation phase.
- 11.9.2.10** LR5 – Active Fish Pond will be subject to insubstantial impact as this LR is relatively far away from the works and will not be affected in Year 10 operation.

- 11.9.2.11** LR6 – There is some minor impact on Rural Development during the construction of Lin Ma Hang Road widening and the proposed entrance at Sha Ling Road. It is considered that the residual impact is expected to be reduced as insubstantial after mitigation measures applied in Year 10 operation.
- 11.9.2.12** LR7 – Marsh and Wetland will be subject to insubstantial impact as this LR is relatively far away from the works and will not be affected in Year 10 operation.
- 11.9.2.13** LR8 – Lowland Woodland will be subject to insubstantial impact as this LR is relatively far away from the works and will not be affected in Year 10 operation.
- 11.9.2.14** LR9 – Wetland in Conservation Area will be subject to insubstantial impact as this LR is relatively far away from the works and will not be affected in Year 10 operation.
- 11.9.2.15** LR10 – MacIntosh Fort will be subject to insubstantial impact as this LR is relatively far away from the works and will not be affected in Year 10 operation.
- 11.9.2.16** LR11 – Agricultural Land will be subject to minor indirect impact by the dust during the works. It is considered that the residual impact is expected to be reduced as insubstantial after mitigation measures applied in Year 10 operation.
- 11.9.2.17** LR12 – Cemetery will be subject to insubstantial impact as this LR is relatively far away from the works and will not be affected.
- 11.9.2.18** LR13 – Vegetation at Engineered Slope will be subject to insubstantial impact as this LR is relatively far away from the works and will not be affected in Year 10 operation.
- 11.9.2.19** LR14 – Some portion of Natural Water Stream will be lost due to the construction of viaduct and some portion of site formation, and the construction works might cause adverse impact to the water quality of the stream. Precautionary measures such as placing of sandbags or slit curtains shall be applied during construction phase. The impact under construction phase shall be slight. It is considered that the residual impact is expected to be reduced as insubstantial after mitigation measures applied in Year 10 operation.
- 11.9.2.20** LR15 – Channelised River will be subject to insubstantial impact as this LR is relatively far away from the works and will not be affected.
- 11.9.2.21** LR16 – There is moderate impact on Transportation Corridor during the works of Sha Ling Road upgrading and Lin Ma Hang road widening. It is considered that the residual impact is expected to be reduced as slight at Day 1 operation, and further reduce to at Year 10 operation after mitigation measures applied along the roadsides of Lin Ma Hang Road.

- 11.9.2.22** LR17 – Vegetation along Utility Facilities will be subject to insubstantial impact as this LR is relatively far away from the works and will not be affected in Year 10 operation.
- 11.9.2.23** LR18 – Pumping Station will be subject to insubstantial impact as this LR is relatively far away from the works and will not be affected in Year 10 operation.
- 11.9.2.24** LR19 – There is substantial impact on Plantation due to the loss of large number of existing trees along the proposed roadwork and viaduct. It is considered that the residual impact is expected to be reduced to moderate after all of the mitigation measures applied at Day 1 operation. The impact is expected to reduce to slight after the compensatory woodland mitigation measures grow and matured in Year 10 operation.
- 11.9.2.25** LR20 – Abandon Fish Pond will be subject to insubstantial impact as this LR is relatively far away from the works and will not be affected in Year 10 operation.
- 11.9.2.26** LR21 – Wet Woodland will be subject to indirect impact by the dust during the works during construction phase. Nevertheless, it is considered that the residual impact is expected to be reduced as insubstantial after mitigation measures applied in Year 10 operation because there will have no direct works on the wet woodland to cause any loss of greening.
- 11.9.2.27** LCA1 - There will be substantial impact on Upland and Hillside Landscape within Sandy Ridge due to the changes of landform for the site formation of the platform. After the proposed mitigation measures of the hydroseeding and the slope greening in Day 1 operation, it is considered that the residual impact on this LCA can be slightly reduced to moderate. In addition, mitigation measures of the landscape design treatment and the aesthetic building design shall be adopted to blend in the development with the surrounding, and hence the residual impact can be reduced to slight after landscape design treatment is applied and the woodland mixed whips planting become mature in Year 10 operation.
- 11.9.2.28** LCA2 - There will be slight impact on Rural Inland Plain Landscape due to the permanent changes on the existing local road and setback of some rural area. However, with the proposed mitigation measures, it is considered that the residual impact on this LCA is insubstantial.
- 11.9.2.29** LCA3 – Cemetery Landscape will be subject to insubstantial impact as this LCA is relatively far away from the proposed site formation and road widening works.
- 11.9.2.30** LCA4 – There will be moderate impact on Major Transportation Corridor Landscape due to the road upgrading and widening of Lin Ma Hang road. However, with the proposed mitigation measures, it is considered that the residual impact on this LCA is insubstantial.

11.9.2.31 LCA5 – Institutional Landscape will be subject to insubstantial impact as this LCA is relatively far away from the proposed site formation and road widening works.

11.9.2.32 LCA6 – Major Watercourse Corridor Landscape will be subject to insubstantial impact as this LCA is relatively far away from the proposed site formation and road widening works.

11.9.2.33 LCA7 – Rural Agricultural Landscape will be subject to insubstantial impact as this LCA is relatively far away from the proposed site formation and road widening works.

11.9.2.34 The overall residual impact on all LR and LCA are considered as acceptable with implementation of mitigation measures.

11.9.3 Residual Visual Impact in Construction Phase

11.9.3.1 VSR R1 - There will be moderate impact on Residents of Villages along Man Kam To Road due to construction works and its relevant of Sha Ling Road and the proposed two entrance will slightly change the appearance of existing villages.

11.9.3.2 VSR R2 - There will be moderate impact on Residents of San Uk Ling due to the proposed road widening of Lin Ma Hang Road and its sensitivity is relatively high.

11.9.3.3 VSR R6 - There will be moderate impact on Residents of Muk Wu Nga Yiu due to the proposed road widening of Lin Ma Hang Road and its sensitivity is relatively high.

11.9.3.4 VSR T2 - There will be slight impact on Travellers along Man Kam To Road due to upgrading of Sha Ling Road and the proposed two entrances.

11.9.3.5 Other VSRs further away will only have glimpse views to the proposed works area. Therefore, the residual impacts will be slight or insubstantial during construction.

11.9.4 Residual Visual Impact in Operational Phase

11.9.4.1 Residual impacts on VSRs are shown in **Table 11.11**.

11.9.4.2 Given the natural topography of the site shielding views of proposed development from some of the VSRs, and the distance and location of the some of the VSRs being further away from the development, it is expected adverse residual impacts are to be slight or insubstantial with implementation of appropriate mitigation measures, including greening measures on proposed slope, retaining walls, viaducts and aesthetic design treatment of noise barriers.

11.9.4.3 VSR R1 - There will be moderate impact on Residents of Villages along Man Kam To Road due to upgrading of Sha Ling Road and the proposed two entrance will slightly change the appearance of existing villages. After the proposed mitigation measures, it is considered that the residual

impact on this VSR can be reduced to slight at Day 1 and Year 10 operation.

11.9.4.4 VSR R2 - There will be moderate impact on Residents of San Uk Ling due to the proposed road widening of Lin Ma Hang Road. After the proposed mitigation measures, it is considered that the residual impact on this VSR can be reduced to slight at Day 1 and insubstantial in Year 10 operation.

11.9.4.5 VSR R6 - There will be moderate impact on Residents of Muk Wu Nga Yiu due to the proposed road widening of Lin Ma Hang Road. After the proposed mitigation measures, it is considered that the residual impact on this VSR can be reduced to slight at Day 1 and insubstantial in Year 10 operation.

11.9.4.6 VSR T2 - There will be slight impact on Travellers along Man Kam To Road due to upgrading of Sha Ling Road and the proposed two entrance. After the proposed mitigation measures, it is considered that the residual impact on this VSR can be reduced to insubstantial at Day 1 and Year 10 operation.

11.9.4.7 Other VSRs further away will only have glimpse views to the proposed works area. Therefore, the residual impacts will be slight or insubstantial during construction.

11.9.4.8 The major source of visual impacts will be the proposed road widening works with noise barriers and the viaduct section. Although the site formation works of the proposed platform will cause changes on the landform, the existing topography will block most of the view to the VSRs. Some portion of the proposed viaduct will be visible from the villages along Man Kam To Road (i.e.VSR R1), however, the visible scale of the viaduct will be relatively small due to the location and existing vegetation (**Figure 11.7.7** from VP7). As regards road widening works and installation of noise barriers, mitigation measures will include aesthetic design treatment of noise barriers, roadsides amenity strip and paving design. Due to the natural topography of the site shielding views of proposed development from some of the VSRs, location of some of the VSRs being further away from the development, and the few number of residents, the impact significant threshold after mitigation is expected to be slight to insubstantial overall.

11.9.4.9 VP1 from Sha Ling Road can represent the closest view from VSR R1 and T2. The VSRs within this area are in general have good existing view. Although the receivers will have a partial view towards the proposed road entrance, it will not cause major changes on the exiting roadside view.

11.9.4.10 VP2 from Man Kam To Road can represent the closest view from VSR R1 and T2 towards the proposed western entrance. The VSRs within this area are in general having good existing view. Although the receivers will have a partial view towards the proposed road entrance, it will not cause major changes on the exiting roadside view.

- 11.9.4.11** VP3 from San Uk Ling can represent the view from the overall western. The VSRs within this area are in general far away from the proposed works, it will not cause major changes on the exiting open rural view.
- 11.9.4.12** VP4 from MacIntosh Fort can represent the overall view from a high level point towards most of the site. Although this view can see the overall appearance of the works and the changes of landform, there is no key VSR at this area.
- 11.9.4.13** VP5 from villages along foothill of Tai Shek Mo can represent the overall view from the eastern side. The VSRs within this area are in general far away from the proposed works, with more than 1100m. The existing landform and vegetation will fully blocked the proposed development, it will not cause major changes on the exiting open rural view.
- 11.9.4.14** VP6 from San Uk Ling towards Lin Ma Hang Road can represent the view for the overall appearance of road widening section at the western side.
- 11.9.4.15** VP7 from residential area at the foothill in the eastern side of Sandy Ridge represents the closest view of the proposed viaduct. However, the existing site condition would block the view of the proposed viaduct, and its associated retaining wall structure would not cause major change to and blockage of the existing view.

11.10 Conclusion

- 11.10.1.1** The proposed development and associated works follow in principle the planning intentions from the Approved Man Kam To Outline Zoning Plan (No.S/NE-MKT/2) and Approved Fu Tei Au and Sha Ling Outline Zoning Plan (No.S/NE-FTA/14). The proposed work will not encroach in any Amenity Area (A), Conservation Area (CA), and Country Park (CP). The proposed barging point at Siu Lam will fall within Tuen Mun Outline Zoning Plan (No. S/TM/33), the works area will encroach the future Comprehensive Development Area (CDA) and Open Space (O), however, those zoning areas are not developed yet and the existing landscape value is considered to be low.
- 11.10.1.2** The layout of the proposed works has been optimised to minimize the impact on existing trees. However, the need for the construction works including site formation, road works, slope works and other ancillary works would inevitably affect a number of trees, and their proposed treatments are elaborated below.
- 11.10.1.3** The alignment of Sha Ling Road has already be optimized. The columbarium site is composed of platforms at +50mPD and two EVAs which have been carefully designed based on the constraints of natural topography, locations of graves and woodland. There is a constraint that the PDA at +50mPD would require an access directly from Sha Ling

Road at the same level. Therefore, at this area, Sha Ling Road would need to attain a level of +50mPD.

11.10.1.4 On the other hand, since there are private lots in the existing Sha Ling Village near Man Kam To Road, the existing run-in has to be maintained as access to these lots and thus the road profile of this section of Sha Ling Road from +12.3mPD to +20mPD has to be kept unchanged. After attaining the level of +20mPD, Sha Ling Road has to be risen to a level of +50mPD for an elevation difference of 30m within a horizontal distance of about 430m in order to access the platform of PDA. This means this section of Sha Ling Road could only be constructed to a gradient of about 7.5%. Based upon the above constraints and with the consideration of minimizing the Cut and Fill volume, the alignment of Sha Ling Road has been optimized. Based upon the above constraints and with the consideration of minimizing the Cut and Fill volume, the alignment of Sha Ling Road has been optimized.

11.10.1.5 The Lin Ma Hang Road improvement is to bring up the existing road to a 7.3m wide 2-lane carriageway with 2m footpath at both sides. To minimize the impact to the existing residences and commercial activities, the proposed widened Lin Ma Hang Road was designed and optimized to minimize the impact to the existing roadside slopes, structures and private lots.

11.10.1.6 The proposed site formation layout and the road works alignment have been optimised and minimise the impact on the existing trees, with consideration on the engineering feasibility, and land resumption issues.

11.10.1.7 As the principle of the project is minimizing the site formation works and the affecting trees, limited land will be available for tree planting. It is expected approximately 200 light standard sized trees will be planted as compensatory tree planting at proposed slope with gentler than 35 degree. Approximately 10 to 15 nos. of heavy standard sized trees will be planted as compensatory tree planting along Lin Ma Hang Road and approximately 130 nos. of heavy standard sized trees will be planted within Sandy Ridge. In addition, woodland mix species whips will be proposed along the hillsides for the woodland compensation. In addition, approximately 16,000 nos. of whips will be planted along the hillsides to create the woodland habitat. The overall residual impact on trees is considered as acceptable with mitigation measures.

11.10.1.8 The proposed works will cause slight adverse landscape impact on the Hillside Woodland Distribute at Valley and along the toe of Upland (LR1.1 and LR1.2), Hillside Shrubby Grassland (LR2.1 and 2.2), and some portion of Plantation (LR19) and relevant upland and hillside landscape character area within the development site (LCA1) after appropriate mitigation measures are implemented. The mitigation measures include large amount of woodland mix species whips planted along the hillsides, and grass hydroseeding and climbers planting to compensate the lost greenery. In addition, landscape design treatment will also be implemented on the platform while the columbarium

buildings and facilities are being built, the overall landscape aesthetic value would be enhanced. Therefore, it is considered that the overall residual landscape impact at Year 10 operation is acceptable with mitigation measures.

11.10.1.9 The proposed site formation work is far away from existing residential uses, and building blocks of the worst case scenario which would be under other project scopes, it is considered that the proposed works will only cause small to negligible visual impact to most of the VSRs. Only the VSRs located close to the Sha Ling Road upgrading road section will suffer more visual impact. It is considered that the residual visual impact at Year 10 operation is acceptable with mitigation measures.

11.10.1.10 The proposed barging point at Siu Lam is currently used by Express Rail Link project, and the baseline condition of such area remained unchanged. Considered that the landscape and visual impact of the area has been assessed in the approved EIA report (AEIAR-143/2009), the landscape and visual impact of the proposed barging point is acceptable with mitigation measures applied.

11.10.1.11 The landscape and visual impact assessment has been conducted according to the criteria and guidelines for evaluating and assessing impacts as stated in Annex 10 and 18 of the TM-EIAO, it is considered that the identified residual impacts, taking account of both importance and degree of compliance, will be acceptable with mitigation measures.

11.11 References

- [11-1] Construction of a Secondary Boundary Fence and New Sections of Primary Boundary Fence and Patrol Road, AEIAR-136/2009
- [11-2] Development of Organic Waste Treatment Facilities Phase II, AEIAR-180/2013
- [11-3] PlanD (2010), Land Use Planning for the Closed Area – Feasibility Study
- [11-4] North East New Territories New Development Areas, AEIAR-175/2013
- [11-5] HyD (2014), Widening of 2 Sections of Lin Ma Hang Road (Sections between Ping Yuen River and between Tsung Yuen Ha and Lin Ma Hang)
- [11-6] Shenzhen River Regulation Project Stage III - Environmental Impact Assessment, AEIAR-035/2000
- [11-7] Hong Kong Section of Guangzhou-Shenzhen-Hong Kong Express Rail Link, AEIAR-143/2009