

CONTENTS

8. LANDSCAPE AND VISUAL IMPACT ASSESSEMENT	8-1
8.1 Introduction.....	8-1
8.2 Environmental Legislation, Standards, Guidelines and Criteria	8-1
8.3 Principal Works Elements.....	8-2
8.4 Assessment Methodology.....	8-2
8.5 Planning and Development Control Framework.....	8-9
8.6 Landscape Baseline Condition.....	8-10
8.7 Landscape Character Area	8-10
8.8 Landscape Resources	8-13
8.9 Tree Survey Baseline Condition.....	8-16
8.10 Visual Baseline Condition.....	8-16
8.11 Visually Sensitive Receivers	8-17
8.12 Potential Landscape and Visual Impacts	8-29
8.13 Landscape Impact Assessment.....	8-30
8.14 Visual Impact Assessment.....	8-37
8.15 Mitigation Measures	8-47
8.16 Cumulative Impact	8-55
8.17 Conclusion	8-55
8.18 Environmental Monitoring & Audit.....	8-55
8.19 Bibliography	8-56

Figures

Figure 8.1	500 m Assessment Area, Visual Envelope and Locations of Visually Sensitive Receiver (VSR) and Vantage Point (VP)
Figure 8.2	Outline Zoning Plan (OZP)
Figure 8.3	Landscape Character Area (LCA)
Figure 8.4	Landscape Resources (LR)
Figure 8.5	Photographic Record of Landscape Character Area
Figure 8.6a-b	Photographic Record of Landscape Resources
Figure 8.7a-g	Photographic Record of Visually Sensitive Receivers
Figure 8.9a-b	Photomontage from VP1 - View from Footbridge near Ngan Shu Street
Figure 8.10a-b	Photomontage from VP2 - View from Luk Tei Tong Bypass Channel
Figure 8.11a	Landscape and Visual Mitigation Plan (Construction Stage)
Figure 8.11b	Landscape and Visual Mitigation Plan (Operation Stage)
Figure 8.12a-e	Illustration for Green Roof and Landscape Works of Stormwater pumping station Mitigation Measures
Figure 8.13a-b	Sections of River Revitalization and Gabion Wall with Mitigation Measures
Figure 8.14a-c	Landscape Character Impacts During Construction, at Day 1 of Operation and Year 10 of Operation
Figure 8.15a-c	Landscape Resources Impacts During Construction, at Day 1 of Operation and Year 10 of Operation

Appendices

Appendix 8.1	Existing Oblique Aerial Photograph
Appendix 8.2	Broad Brush Tree Survey

Tables

Table 8.1 - Matrix of Impact Significance
Table 8.2 - Details of Administrative Planning Zones
Table 8.3 - Sensitivity of Landscape Character Areas
Table 8.4 - Sensitivity of Landscape Resources
Table 8.5 - Details of Visually Sensitive Receivers
Table 8.6 - Summary of Magnitude of Change on LCAs and LRs
Table 8.7 - Summary of Impact Significance on LRs and LCAs before mitigation
Table 8.8 - Summary of Magnitude of Change on VSRs before Mitigation
Table 8.9 - Summary of Impact Significance on VSRs before Mitigation
Table 8.10 - Proposed Construction Phase Mitigation Measures for Landscape and Visual Impacts
Table 8.11 - Proposed Operation Phase Mitigation Measures for Landscape and Visual Impacts
Table 8.12- Summary of Impact Significance on LRs and LCAs, both before and upon mitigation
Table 8.13- Summary of Impact Significance on VSRs, both before and upon mitigation

8. LANDSCAPE AND VISUAL IMPACT ASSESSEMENT

8.1 Introduction

8.1.1 This Section presents the Landscape and Visual Impact Assessment (LVIA) associated with the construction and operation of the proposed Project in accordance with Clause 3.4.9 and *Appendix G* of the *EIA Study Brief No. ESB-334/2022*.

8.1.2 The scope of this LVIA assessment includes the followings:

- Conduct landscape and visual baseline studies that describe the existing conditions;
- Identify and describe landscape and visual impacts of the areas;
- Define the significance and magnitude of these impacts;
- Propose mitigation measures by taking local conditions and experience in consideration and to describe the maintenance and management of these mitigation measures; and
- Indicate the residual impacts after mitigation.

8.2 Environmental Legislation, Standards, Guidelines and Criteria

8.2.1 The following legislation and guidelines are applicable to the landscape and visual impact assessment (LVIA) in Hong Kong:

- *Environmental Impact Assessment Ordinance (Cap.499)* and the *Technical Memorandum on EIA Process (EIAO TM)*, particularly *Annexes 10, 11 and 18*;
- *EIAO Guidance Note 8/2010*;
- *EIA Study Brief No. ESB-334/2020*;
- *Hong Kong Planning Standards and Guidelines*;
- *Town Planning Ordinance (Cap 131)*;
- *Forests and Countryside Ordinance (Cap. 96)* and its subsidiary legislation the *Forestry Regulations*;
- *Country Parks Ordinance (Cap 208)*;
- *Territorial Development Strategy Review: 1995*;
- *DEVB TCW No.04/2020 – Tree Preservation*; and
- *DEVB TCW No. 05/2020 – Registration and Preservation of Old and Valuable Trees (OVT)*;

- *DEVB TCW No. 6/2015 – Maintenance of Vegetation and Hard Landscape Features; and*
- *ETWB TCW No. 5/2005 – Protection of Natural Streams / Rivers from Adverse Impacts Arising from Construction Works*

8.3 Principal Works Elements

8.3.1 The Project comprises the drainage improvement works as briefly described in the following:

Tai Tei Tong River

- (a) Construction of flood walls;
- (b) Reconstruction of gabion walls;
- (c) River reprofiling and associated works;
- (d) Modification of agricultural weirs; and
- (e) Construction of fish ladders and associated works.

Nam Bin Wai, Chung Hau, Ling Tsui Tau and Ma Po Tsuen

- (a) Construction of access across Pak Ngan Heung River;
- (b) Construction of stormwater pumping station and the associated drainage works;
- (c) Construction of diversion box culvert from Tai Tei Tong River to Luk Tei Tong Bypass Channel; and
- (d) Construction of tidal gate at River Silver and other associated works.

Luk Tei Tong River (South) and Luk Tei Tong Bypass Channel

- (a) Reconstruction of gabion walls;
- (b) Construction of box culvert;
- (c) Construction of mechanical penstock; and
- (d) River revitalisation and associated works.

8.4 Assessment Methodology

8.4.1 The LVIA follows the criteria and guidelines in *Annexes 10, 11 and 18 of the EIAO TM*. It also follows the Requirements for LVIA, as stated in Appendix G of the *EIA Study Brief No. ESB-334/2022*.

Definition of the Assessment Area

- 8.4.2 For Landscape Impact Assessment, the Assessment Area includes all terrestrial and aquatic surface areas that are within 500 m of the Works Area, which is illustrated in **Figure 8.1**.
- 8.4.3 For Visual Impact Assessment, the Assessment Area includes terrestrial and aquatic areas within the Primary Visual Envelope of the works, or Zone of Visual Influence (ZVI), which is illustrated in **Figure 8.1**. The ZVI is defined according to the EIA Ordinance Guidance Note 8/2010, item 3.3 (b). It further indicates that natural / man-made features such as ridgeline or building blocks determine the possibility of views to the proposed Project and define the extent of the visual envelope. Identification of the visual envelope has been achieved by site visit and desk-top study of topographic maps and photographs, and GIS analysis, to determine potential visibility of the Project from various locations. GIS analysis uses known data regarding the proposed built structures to model the area that can potentially see the developments. It should be noted that GIS analysis uses topographic data as a baseline, disregarding existing built forms and vegetation which reduce the actual visual envelope.
- 8.4.4 Annotated oblique aerial photographs presented in **Appendix 8.1** show the approximate Works Area, the baseline landscape areas and landscape resources.

Landscape Impact Assessment Methodology

- 8.4.5 The assessment of potential impacts to the existing landscape comprises two distinct sections:
- Baseline survey, in this case comprising a tree survey; and
 - Potential landscape impact assessment.
- 8.4.6 To conduct the landscape baseline study that describes the physical properties of the landscape, surveys are carried out with considerations in both the present and planned future landscape: the first is a desktop survey and the second is a site survey. Landscape elements considered included:
- Local topography;
 - Existing roadside planting;
 - Woodland extent and type;
 - Other vegetation types;
 - Built form;
 - Patterns of settlement;
 - Land use;

- Scenic spots;
- Details of local materials, styles, streetscapes;
- Prominent watercourses; and
- Cultural and religious identity.

8.4.7 Planned developments either within the Assessment Area or adjacent to it are also considered. The baseline survey formed the basis of the landscape context by describing broadly homogenous units of similar character.

8.4.8 Factors affecting the evaluation of the sensitivity of landscape character / resources include:

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

8.4.9 The sensitivity of individual landscape character areas (LCAs) and landscape resources (LRs) are rated using high, medium or low depending not only on the quality of elements present but also their sensitivity to change and local or regional importance. The sensitivity of each landscape resource and character area is classified as follows:

- **High:** Important landscape or landscape resource with particularly distinctive positive aspects of character or high rarity value, sensitive to relatively small changes;
- **Medium:** Landscape or landscape resource with moderately distinctive positive aspects of character or rarity value reasonably tolerant to change; and
- **Low:** Landscape or landscape resource common across Hong Kong with little distinctive positive character or low rarity value with a high tolerance to change.

8.4.10 Factors affecting the evaluation of the magnitude of landscape impacts include:

- Compatibility of the Project with the surrounding landscape;
- Duration of impacts under construction and operational phases;
- Scale of the development; and
- Reversibility of change.

8.4.11 The magnitude of change arising from the implementation of the Project is rated as large, intermediate, small, or negligible. The impact magnitude is classified as follows:

- **Large:** A clearly evident, frequently perceived and continuous change in landscape characteristics affecting an extensive area. The change may be long term and would not be reversible;
- **Intermediate:** A noticeable change in landscape character, frequently perceived or continuous and over a wide area; or a clearly evident change over a restricted area that may be infrequently perceived. The change may be medium to long term and may not be reversible;
- **Small:** A subtle change in landscape character over a wide area of a more noticeable change either over a restricted area or infrequently perceived. The change may be short term; and
- **Negligible:** The imperceptible, barely or rarely perceptible change in landscape characteristics. The change may be short term.

8.4.12 The significance threshold for impacts to landscape character and resources is rated as major, moderate, minor or negligible. The impact significance is classified as follows:

- **Significant:** Negative / positive impact where the proposal would cause a very noticeable deterioration or improvement to existing landscape resources / character;
- **Moderate:** Negative / positive impact where the proposal would cause a noticeable deterioration or improvement to existing landscape resources / character
- **Slight:** Negative / positive impact where the proposal would cause a barely perceptible deterioration or improvement to existing landscape resources / character; and
- **Insignificant:** No discernible change to existing landscape resources / character.

8.4.13 The matrix of impact significance is shown in **Table 8.1**.

Table 8.1 - Matrix of Impact Significance

Magnitude of Landscape Impact	Sensitivity of Landscape Resource			
		Low	Medium	High
Negligible	Insignificant	Insignificant	Insignificant	Insignificant
Small	Insignificant	Slight	Moderate	Moderate
Intermediate	Slight	Moderate	Significant	Significant
Large	Moderate	Significant	Significant	Significant

Tree Survey Methodology

- 8.4.14 For the purpose of the tree survey, the guidelines from DEVB TCW No.04/2020 – Tree Preservation are adopted.
- 8.4.15 All trees in the survey were surveyed individually. The tree survey identified the following attributes of each individual tree:
- Tree number;
 - Botanical name;
 - Height;
 - Crown spread
 - Trunk girth (measured 1.3 meter from the ground);
 - Trunk diameter at breast height;
 - An assessment of form;
 - An assessment of health;
 - An assessment of amenity value;
 - Survival rate after transplantation;
 - The Government Department responsible for maintaining the tree (where works to trees are proposed);
 - Proposed treatment / recommendation;
 - Justification of treatment proposal; and
 - Other remarks.
- 8.4.16 Notes were made of any rare or protected species found as well as trees of protection interest and special significance by virtue or rarity, protected status, age or other value.
- 8.4.17 The survey information included tree height, crown spread and trunk girth. The information was then used as basis of the detailed tree survey, including identification of the species, and evaluation of the trees in terms of health, form and amenity value, survival rate after transplant, as well as its proposed treatment (i.e. retain / transplant / fell).

Visual Impact Assessment Methodology

- 8.4.18 The assessment of the potential visual impact of the Project comprises two distinct parts:

- Baseline survey; and
- Visual impact assessment.

8.4.19 For the Visual Impact Assessment (VIA), the assessment area is taken to include the visual envelope or ZVI, which includes all areas from which the Project can be seen (**Figure 8.1**). This area from the view shed formed by natural / man-made features such as existing ridgelines, built development and woodland / large trees.

8.4.20 The baseline survey of all views towards the Project is undertaken by identifying:

- The visual envelope as has been described above and may contain both open and partial views of the Project; and
- The visually sensitive receivers (VSRs) within the visual envelope whose views will be affected by the Project. The potential receivers are categorized into four groups:
 - a) Residential (R);
 - b) Occupational (O);
 - c) Leisure and Cultural (LC); and
 - d) Travelling (T)

8.4.21 There are five (5) factors affecting the sensitivity of receivers (SRs) when evaluating the visual impact, including:

- 1) Value and quality of existing views. In this case, a view from the residential property, which would normally be considered the most sensitive view may be less so if, for example, it is degraded by existing development or partially screened by intervening visual obstacles such as existing vegetation;
- 2) Availability and amenity alternative views for the sensitivity of receivers (SRs) are also assessed. The location and direction of its view relative to the Project also influences the sensitivity of each group. Typical viewpoints from within each of the visually sensitive groups are identified and their views described;
- 3) The type and estimated number of receiver population is also the factor affecting the evaluation of visual impact;
- 4) The duration of frequency of view from the SRs are also considered under the assessment; and
- 5) The degree of visibility from the SRs is also evaluated.

8.4.22 The baseline survey formed the basis of the visual character and quality of the site. Potential visual impacts are resulted from:

- Identification of the sources of visual impacts, and their magnitude, that would be generated during construction and operation of the Project; and
- Identification of the principal visual impacts primarily in consideration of the degree of change to the baseline conditions.

8.4.23 The impact assessment is related to the typical Vantage Points (VP) within the Visual Envelope, as identified previously, and their existing and potential views subsequent to the Project. VPs were also selected to further analyse the visual impact of the Project through the use of photomontages. The VPs were selected to represent worst case scenarios, due to their proximity to or elevated view of the Works Area. The photomontages provide a comparison between existing views, proposals after completion without mitigation measures and with mitigation measures.

8.4.24 The views available to the identified VSRs are rated according to their sensitivity to change using high, medium or low. The sensitivity of VSRs is classified as follows:

- **High:** The VSR is highly sensitive to any change in their viewing experience;
- **Medium:** The VSR is moderately sensitive to any change in their viewing experience; and
- **Low:** The VSR is only slightly sensitive to any change in their viewing experience.

8.4.25 The factors affecting the magnitude of change for assessing the visual impacts include the following:

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

8.4.26 The magnitude of change arising from the implementation of the Project is rated as large, intermediate, small or negligible. The impact magnitude is classified as follows:

- **Large:** A clear evident change in the view at a close distance, affecting a substantial part of the view, continuously visible for a long duration, or obstructing important elements of the view. The change may be medium to long term and would not be reversible;
- **Intermediate:** A noticeable change in the view at an intermediate distance, resulting in either a distinct new element in a prominent part of the view, or a

more wide-ranging, less concentrated change across an expansive area. The change may be medium to long term and may not be reversible.

- **Small:** A subtle change in the view, at long distances, or visible for a short distance, perhaps at an oblique angle, or which blends in to an extent with the existing view. The change may be short term; and
- **Negligible:** A change which is barely or rarely perceptible, at very long distances, or visible for a short duration, perhaps at an oblique angle, or which blends in with the existing view. The change may be short term.

8.4.27 The significance threshold for visual impact is rated in a similar fashion to the landscape impact, i.e. significant, moderate, slight and insignificant (**Section 8.4.12, Table 8.1**).

8.4.28 The criteria and matrices used to determine the degree of impact described in the above sections. Both landscape and visual impacts are products of magnitude of change and relative sensitivity of the sensitive receiver. Ultimately, the acceptability of the Project is dependent upon the significance of the residual impacts in accordance with the five (5) criteria set out in *Annex 10* of the *EIAO – Technical Memorandum (TM)*, namely ‘beneficial’, ‘acceptable’, ‘acceptable with mitigation measures’, ‘unacceptable’ and ‘undetermined’.

8.5 Planning and Development Control Framework

8.5.1 The proposed works area mainly falls within an area with various zones on the S/I-MWF/10 Mui Wo Fringe Outline Zoning Plan while part of it is not covered by any statutory town plan. The surrounding area are covered by S/I-MWN/2 Mui Wo North Outline Zoning Plan; and S/SLC/21 South Lantau Coast Outline Zoning Plan.

8.5.2 The extent of the Works Area and the Assessment Area within the planning control framework is shown in **Table 8.2** and **Figure 8.2**.

Table 8.2 - Details of Administrative Planning Zones

Reference	Details	Works Area within the Zone (ha)	Assessment Area within the Zone (ha)
AGR	Agriculture	0.58	19.08
G/IC	Government / Institution / Community	0.24	2.97
GB	Green Belt	0.00	81.47
MRDJ	Major Road and Junction	0.00	1.80
O	Open Space	0.03	1.22
R(A)	Residential (Group A) (R(A))	0.00	0.77
R(D)	Residential (Group D) (R(D))	1.09	26.61
REC	Recreation (REC)	0.92	14.61
U	Undetermined (U)	0.00	1.67
V	Village Type Development (V)	0.22	12.65

8.5.3 It is noted that the development involve construction of pumping station at a site falls within "Government/Institution or Community" zone on approved Mui Wo Fringe OZP. Such pumping station may be regarded as 'Public Utility Installation' use, which is a Column 1 use and is always permitted at the subject zone.

8.6 Landscape Baseline Condition

8.6.1 The Landscape Impact Assessment Area covers the area that is within 500 m from the boundary of the Project (**Figure 8.1**). The Assessment Area is predominately wide flat land but has some hills (e.g. Fu Kong Shan and Butterfly Hill) contained abundant agricultural land and significant watercourses, including those channelized, semi-natural and natural watercourses. There are developed areas including rural villages (e.g. Ling Tsui Tau, Ma Po Tsuen, Tai Tei Tong, Luk Tei Tong, Ha Tsuen Long and Mui Wo Kau Tsuen), residential estates (e.g. Ngan Wan Estate, Silver Waves Court), and agriculture area.

8.6.2 Landscape baseline of the Assessment Area comprises landscape character and landscape resources (LR). Landscape Character Areas (LCAs) and landscape resources are respectively shown in **Figure 8.3** and **Figure 8.4**. Photographic records of LRs and LCAs are respectively provided in **Figure 8.5** and **Figure 8.6**.

8.7 Landscape Character Area

8.7.1 Four (4) LCAs have been identified in the Assessment Area (**Figure 8.3**), including:

- LCA1 Bay Landscape at Silver Mine Bay;
- LCA2 Uplands and Hillsides in West of Mui Wo;
- LCA3 Rural Inland Plains of Mui Wo and Surrounding Villages; and
- LCA4 Rural Township Landscapes at Fu Kong Shan.

LCA1 Bay Landscape at Silver Mine Bay

8.7.2 This LCA refers to Silver Mine Bay in the Assessment Area. This landscape consists predominantly of water and waterborne recreational activity. It is the combination of their enclosure, the character of the shoreline, marine activities. They are reasonably tolerant to change and the sensitivity of this LCA is **high**.

LCA2 Uplands and Hillsides in West of Mui Wo

8.7.3 This refers to areas above 40 mPD dominated by woodland and shrubby grassland. The southern and western part, which is near or at the North Lantau Country Park, falls within this LCA. The landscape amenity, significance and quality of this LCA are high with little tolerance to change and its sensitivity is considered to be **high**.

LCA3 Rural Inland Plains of Mui Wo and Surrounding Villages

- 8.7.4 This is predominantly low-lying flood plain with several, small naturally vegetated areas and some scattered small villages areas with low rise-buildings and agricultural land (active and inactive). The area has an agricultural history and there are some watercourses that contribute to the irrigation demands as part of this landscape. The area contains a low level of built environment including some village houses scattered throughout the area, e.g. at Tai Tei Tong, Luk Tei Tong, Mui Wo Kau Tsuen, Tsoi Yuen Tsuen and Sun Lung Wai. The area has high landscape value considering its regional significance in terms of its agricultural nature. This LCA's sensitivity is **medium**.

LCA4 Rural Township Landscape at Fu Kong Shan

- 8.7.5 This LCA refers to relatively model residential area with low-rise/medium-rise buildings, such as Silver Waves Court, Mui Wo River Silver Garden and Ngan Wan Estate. Mui Wo Municipal Services Building, Mui Wo Swimming Pool and Silvermine Beach Resort are also included in this LCA and it also includes some areas of recreation and institution among the more residential areas. This LCA has more developed landscape and a high tolerance to change and its sensitivity is **low**.
- 8.7.6 The four (4) LCAs' sensitivity and their ability to accommodate change are summarised in **Table 8.3**.

Table 8.3 - Sensitivity of Landscape Character Areas

Ref.	Works Area within the LCA (ha)	Assessment Area within the LCA (ha)	Quality and Maturity (High / Medium / Low)	Rarity (High / Medium / Low)	Importance (Local / District / Regional)	Ability to Accommodate Change	Sensitivity to Change
LCA1 Bay Landscapes at Sliver Mine Bay	N/A	10.8	High	Medium	District	Medium	High
LCA2 Uplands and Hillside in West of Mui Wo	N/A	63.5	High	Medium	District	Low	High
LCA3 Rural Inland Plains of Mui Wo and Surrounding Villages	3.24	125.0	Medium	Medium	Local	Medium	Medium
LCA4 Rural Township Landscapes at Fu Kong Shan	0.29	39.5	Medium	Low	Local	High	Low

8.8 Landscape Resources

8.8.1 Twelve (12) landscape resources are identified within the Assessment Area (**Figure 8.4**).

LR1 – Secondary Woodland

8.8.2 This LR refers to trees growing on the areas near to village areas, foothills, Luk Tei Tong and Lung Mei Hang. The approximate nos. of tree in LR1 is 4,000 and the canopy of these woodland stands was dominated by *Acacia confuse*, *Litchi chinensis*, *Schefflera heptaphylla*, *Sterculia lanceolate* and *Sterculia monosperma*. This LR is considered to have **medium** sensitivity.

LR2 – Shrubland / Grassland

8.8.3 This LR located at the norther part of Assessment Area close to Tsoi Yuen Tsuen and Nim Po Tsuen, where abandoned land has become overgrown with tall grasses. There are about 470 nos. of tree within LR2 and the dominant species for this area are *Clausena lansium*, *Dimocarpus longan* and *Celtis sinensis*. This LR is considered to have **medium** sensitivity.

LR3 – Mangrove

8.8.4 This LR refers to the mangrove close to Wang Tong River. This LR is part of the coastal habitat with high aesthetic and landscape value. The approximate tree nos. for LR3 is 570 and the dominant species are *Hibiscus tiliaceus*, *Archontophoenix alexandrae* and *Dimocarpus longan*, etc. This LR is considered to have **high** sensitivity.

LR4 – Marsh

8.8.5 This LR refers to the vegetation with saturated soil conditions. This LR dominates at Nim Po Tsuen, Ha Tsuen Long Luk Tei Tong with aesthetic and landscape value. The approximate nos. of tree is 1,300 and the dominant tree species are *Clausena lansium*, *Dimocarpus longan*, *Hibiscus tiliaceus* and *Celtis sinensis* etc. This LR is considered to have **medium** sensitivity.

LR5 – Agricultural Land

8.8.6 This LR refers to agricultural land that is vital to the rural character of the area. Some of the farmland is abandoned, mostly colonized by wild grasses. There are about 1,300 nos. of trees within LR5 and the dominant species are *Clausena lansium*, *Dimocarpus longan*, *Bauhinia* spp. and *Celtis sinensis*. This LR is considered to have **medium** sensitivity.

LR6 – Plantation

8.8.7 This LR refers to vegetation for soil erosion control. This LR located along the South Lantau Road. The approximate nos. of tree LR6 is 1,900 and the dominant tree species are *Acacia confusa*, *Litchi chinensis*, *Sterculia monosperma* and *Sterculia lanceolata*. As this LR is not naturally vegetated, this LR is considered to have **medium** sensitivity.

LR7 – Developed Area

- 8.8.8 This LR includes the relatively modern township, such as Silver Waves Court, Chung Hau and Ngan Wan Estate and their associated features such as playgrounds, swimming pool, and office buildings (e.g. Mui Wo Government Offices). It also includes more developed, denser villages still with predominantly low rise buildings, such as Tai Tei Tong, Luk Tei Tong and Tseng Tau San Tsuen. This LR is mainly modified but has some softscape treatment including some trees. The approximate nos. of tree is 1,200 nos. and the main tree species for LR7 are *Bauhinia* spp., *Clausena lansium*, *Dimocarpus longan* and *Celtis sinensis*. This LR is considered to have **low** sensitivity.

LR8 – Pond

- 8.8.9 This LR refers to water ponds used for irrigation and abandoned ponds close to Ngau Wan Estate and Mui Wo Kau Tsuen. This LR is considered to have **medium** sensitivity.

LR9 – Semi Natural Water Course

- 8.8.10 This LR refers to the sections of River Silver of where it is modified in three meandering tributaries, namely Pak Ngan Heung River, Tai Tei Tong River and Wang Tong River close to Tai Wai Yuen. These are vegetated with partially channelised. This LR is considered to have **medium** sensitivity.

LR10 – Channelized Water Course

- 8.8.11 This LR refers to River Silver and Luk Tei Tong Bypass which has been modified significantly within the Assessment Area. It also includes narrower sections from Luk Tei Tong, Ma Po Tsuen and Ling Tsui Tau. This LR act as pier for small marine vessels, such as sampans or speed boats. These watercourses are linked to semi natural watercourses for continuity of watercourse resources. It is considered to have **low** sensitivity.

LR11 – Sandy Shore

- 8.8.12 This LR refers to Silver Mine Bay Beach. This resource consists predominantly of sand, and recreational activity. It is considered to have **medium** sensitivity.

LR12 – Sea Water

- 8.8.13 This LR refers to Silver Mine Bay. This resource consists predominantly of sea water, marine traffic and waterborne recreational activity. It is considered to have **medium** sensitivity.

- 8.8.14 **Table 8.4** summarizes the twelve (12) landscape resources' sensitivity.

Table 8.4 - Sensitivity of Landscape Resources

Landscape Resources	Works Area within the LR (ha)	Quality and Maturity (High / Medium / Low)	Rarity (High / Medium / Low)	Importance (Local / District / Regional)	Ability to Accommodate Change	Sensitivity to Change
LR1 - Secondary Woodland	0.0	Medium	Medium	Local	Medium	Medium
LR2 - Shrubland / Grassland	0.0	Medium	Low	Local	Medium	Medium
LR3 - Mangrove	0.0	High	High	Local	Low	High
LR4 - Marsh	0.7	Medium	High	Local	Medium	Medium
LR5 - Agricultural Land	1.3	Medium	Medium	Local	Medium	Medium
LR6 - Plantation	0.0	Medium	Low	Local	Medium	Medium
LR7 - Developed Area	0.4	Medium	Low	Local	High	Low
LR8 - Pond	0.0	Medium	Low	Local	Medium	Medium
LR9 - Semi Natural Watercourse	0.5	Medium	Low	Local	Medium	Medium
LR10 - Channelised Watercourse	0.6	Medium	Low	Local	High	Low
LR11 - Sandy Shore	0.0	Medium	Medium	Local	Medium	Medium
LR12 - Sea Water	0.0	Medium	Medium	District	Medium	Medium

8.9 Tree Survey Baseline Condition

- 8.9.1 Over 15,307 trees were estimated within the assessment boundary of the Broad-Brush Tree Survey (enclosed in **Appendix 8.2**) and there are around 370 trees were identified in vicinity of the Works Area. According to the Tree Survey results, the dominant tree species are *Celtis sinensis*, *Sapium sebiferum* and *Mallotus paniculatus*. There was no tree species of conservation interest recorded identified.
- 8.9.2 There are no old and valuable trees listed in the 'Register of Old and Valuable Trees' under DEVB TCW No. 5/2020 (OVTs) and Trees of Particular Interest (TPIs) under *Guidelines for Tree Risk Assessment and Management Arrangement (9th Edition (Rev.3))* identified within the Works Area. However, within the 500m Assessment Area, 2 listed OVTs and 2 tree species of TPIs, *Artocarpus hypargyreus* and *Aquilaria sinensis*, are identified. *Artocarpus hypargyreus* and *Aquilaria sinensi* are classified as Near Threatened (NT) and recorded in China Plant Red Data Book and Illustration of Rare & endangered plant in Guangdong Province. There are estimated 170 nos. of TPIs within 500mm Assessment Area. **Appendix 8.2 (Drawing No. 409615/BIN/BTS/001)** shows the locations of the OVTs and TPIs.
- 8.9.3 Before commencement of the works at the proposed drainage improvement works, an update tree survey including topographic survey will be conducted. A Tree Preservation and Removal Proposal (TPRP), which will include the update tree survey findings and compensatory planting details will be submitted in accordance with *DEVB TC(W) No. 04/2020*. It should be noted that the location and the number of trees for the compensatory planting will be detailed and finalised in the TPRP, which is subject to the approval of relevant authorities.

8.10 Visual Baseline Condition

- 8.10.1 The visual envelope, which is the area from which any part of the proposed Project would be able to be seen, is shown in **Figure 8.1**. The general baseline visual character of the area where the Project is to be undertaken is characterised predominantly low-lying land with some small vegetated hills. Distant to the Works Area to Butterfly Hill that form a distant back drop. The overall visual character is a combination of various natural and man-made elements.
- 8.10.2 The nature of the Project means that the permanent above ground structures are limited to the proposed stormwater pumping station and cross bridge across Pak Ngan Heung River.
- 8.10.3 Other Project components along Mui Wo Rural Committee Road, Ngan Shek Street and Ngan Shu Street, i.e. proposed diversion drain, proposed stormwater drain and outlet pipe of stormwater pumping station, and the proposed tidal gate are all low lying structures located below surrounding ground level and generally inconspicuous.
- 8.10.4 VSRs, people who will potentially view the construction and / or the operation of the Project, have been identified (**Figure 8.1**). Photographic records of the VSRs are shown in **Figure 8.7a-g**. As mentioned in **Section 8.4.20**, the potential VSRs are categorized into four groups:

- Residential (R);
- Occupational (O);
- Leisure and Cultural (LC); and
- Travelling (T).

8.11 Visually Sensitive Receivers

- 8.11.1 Due to the nature of the Project (limited to locations of low elevation), vegetation in much of the area around and shielding the Works Area and the absence of frequent human presence on much of the higher ground in the vicinity of the Project, VSRs were mainly selected close to the Works Area. This also represented the worst-case scenario for visual impacts.
- 8.11.2 Upon investigation, view towards the Works Area by residents in Tai Wai Yuen, were shielded by Butterfly Hill and residents in Round Table Village were shielded by Fu Kong Shan and associated trees to the west and other natural vegetation. Hikers of Islands Nature Heritage Trail - Mui Wo Section were also considered not to be able to see the Works Area due to vegetation blocking their line of sight, particularly tall trees growing at Butterfly Hill. All these sites were therefore considered to fall outside the Zone of Visual Influence.
- 8.11.3 Thirty-six (36) VSRs were selected within the Zone of Visual Influence to represent people in this area. All VSRs are mapped in **Figure 8.1** to show the representative areas where these VSRs are located. Two (2) VPs were also selected as being the best locations from which to illustrate the impact of the project on the area through the use of photomontages, as described in **Section 8.14**. The sensitivities of each of these VSR groups are described below and summarised in **Table 8.5**.

Residential Visually Sensitive Receivers (R1-R15)

R1- Residents of Tai Tei Tong

- 8.11.4 This VSR refers to some residents of Tai Tei Tong. It is a village with low rise houses facing the Project. These viewers have alternative views and will only have a partial view of the Works Area as their view is partially blocked by the surrounding vegetation. Since the residents of Tai Tei Tong live in low rise residential buildings and their view is relatively horizontal to the Works Area, it is considered to have **medium** sensitivity. VP 2 is selected to represent the view of this VSR (**Figure 8.10**).

R2 - Residents of Nam Bin Wai

- 8.11.5 This VSR refers to some residents of Nam Bin Wai, which is a small village close to the proposed drainage improvement works alignment. Only a few houses face the Works Area and these few viewers have open and full views towards the Works Area, especially at elevated view. Their view is predominately natural. These houses have alternative views from other windows not facing the Works Area. This VSR is

considered to have **medium** sensitivity. VP1 is selected to represent the view of this VSR (**Figure 8.9**).

R3 - Residents of Ma Po Tsuen

- 8.11.6 Residents of Ma Po Tsuen will border the Works Area. There are houses to the east of the village that have open and full views towards the Works Area, especially at elevated view. These houses have alternative views from other windows not facing the Works Area. This VSR is considered to have **medium** sensitivity. VP2 is selected to represent the view of this VSR (**Figure 8.10**).

R4 - Residents of Ling Tsui Tau

- 8.11.7 Ling Tsui Tau is a small village. There are houses to the west and south of the village have open and full views towards the Works Area. Very few residents will have open and full views and they are considered to have **medium** sensitivity. VP2 is selected to represent the view of this VSR (**Figure 8. 10**).

R5 - Residents of Tsoi Yuen Tsuen

- 8.11.8 Residents of Tsoi Yuen Tsuen will border the Works Area. Only a few houses are tall enough to see out the surrounding vegetation and the planting between the village and the river, to possibly to see the Works Area. Very few residents will have partial views and they are considered to have **medium** sensitivity. VP2 is selected to represent the view of this VSR (**Figure 8. 10**).

R6 - Residents of Mui Wo Kau Tsuen

- 8.11.9 Residents of Mui Wo Kau Tsuen will border the Works Area. Only a few houses are tall enough to see out the surrounding vegetation and the planting between the village and the river, to possibly to see the Works Area. Very few residents will have partial views and they are considered to have **medium** sensitivity. VP2 is selected to represent the view of this VSR (**Figure 8. 10**).

R7 - Residents of Chung Hau

- 8.11.10 This VSR includes some residents of Chung Hau. Being blocked by the nearby buildings with similar heights, the VSR will mainly not see the Works Area. Some on the top floor might get occasional partial views of the Works Area, and they have alternative views. Therefore, this VSR is considered to have **medium** sensitivity. No VP is selected to represent the view of this VSR since the Works Area to this VSR are below the surrounding ground level.

R8 - Residents of Ngan Ho Court

8.11.11 This VSR refers to residents living in Ngan Ho Court. Their view is tall enough to have open and full view towards the Works Area. However, these houses have alternative views from other windows not facing the Works Area. Since this VSR is facing the channelized River Silver, they are considered to have **medium** sensitivity. VP1 is selected to represent the view of this VSR due to similar features of improvement works (**Figure 8.9**).

R9 - Residents of Silver View Centre

8.11.12 This VSR includes some residents of Silver View Centre, which is surrounded by buildings with similar height. Residents of 2 – 3 storey houses will have a full view towards the Works Area. However, these houses have alternative views from other windows not facing the Works Area. Since this VSR is facing the channelized River Silver, it is considered to have **medium** sensitivity. VP1 is selected to represent the view of this VSR due to similar features of improvement works (**Figure 8.9**).

R10 - Residents of Silver Waves Court

8.11.13 This VSR includes some residents of Silver Waves Court which are 3 storey height. Their view to Works Area are blocked by the nearby buildings with similar heights. This VSR will have occasional glimpse views of the Works Area and mainly not see the Works Area. Therefore, this VSR is considered to have **low** sensitivity. No VP is selected to represent the view of this VSR since the Works Area to this VSR are below the surrounding ground level. The proposed development/ works would not be visible and further assessment is not required.

R11 - Residents of Luk Tei Tong

8.11.14 Luk Tei Tong is bordering the Works Area along river alignment. There are some houses to the east and north of the village that have open and full views towards the Works Area, especially at elevated view. Their view is predominately natural scenery. This VSR is considered to have **high** sensitivity. VP2 is selected to represent the view of this VSR (**Figure 8.10**).

R12 - Residents of Sun Lung Wai

8.11.15 This VSR refers to residents of Sun Lung Wai to the northwest of River Silver. Being blocked by the nearby villages, namely Tai Tei Tong and Tsoi Yuen Tsuen, and natural vegetation, their views are glimpse. This VSR has mainly natural and high-quality existing views and they are considered to have **medium** sensitivity. VP2 is selected to represent the view of this VSR (**Figure 8.10**). The proposed development/ works would not be visible and further assessment is not required due to the considerable distance and blocked by nearby built form.

R13 - Residents of Wang Tong

8.11.16 This VSR refers to a few residents at Wang Tong to the north of River Silver. Being blocked by the nearby building with similar height (2-3 storey), and natural vegetation,

their views are glimpse to the Works Area. This VSR has mainly natural and high-quality existing views and they are considered to have **medium** sensitivity. No VP is selected to represent the view of this VSR since the Works Area to this VSR are below the surrounding ground level. The proposed development/ works would not be visible and further assessment is not required due to the considerable distance and blocked by nearby built form.

R14 - Residents of Ngan Wan Estate

8.11.17 This VSR refers to residents living in Ngan Wan Estate. Their view is tall enough to have open and full view towards the Works Area. However, these houses have alternative views from other windows not facing the Works Area. They are considered to have **medium** sensitivity. VP1 is selected to represent the view of this VSR due to similar features of improvement works (**Figure 8.9**).

R15 - Residents of Ngan Wai Court

8.11.18 This VSR includes residents living in Ngan Wai Court, facing to the northwest. Their view is tall enough to have open and full view towards the Works Area. However, these houses have alternative views from other windows not facing the Works Area. They are considered to have **medium** sensitivity. VP1 is selected to represent the view of this VSR due to similar features of improvement works (**Figure 8.9**).

Occupational Visually Sensitive Receivers (O1 to O6)

O1 - Silver Plaza (including Lai Nursing Centre and Chan Shi Sau Memorial Social Service Centre)

8.11.19 This VSR refers to the patients and staff going to the nursery centre. This VSR mainly will not have a view to the Works Area as their view towards the Works Area is being blocked by the buildings nearby. Therefore, this VSR is considered to have **medium** sensitivity. No VP is selected to represent the view of this VSR since the Works Area to this VSR are below the surrounding ground level. The proposed development/ works would not be visible and further assessment is not required as it is blocked by nearby built form.

O2 - Mui Wo Government Office Buildings

8.11.20 This VSR refers to the staff working at the Mui Wo Government Office Buildings. Although the office is tall enough and may has a full view of the Project, people at their workplace would mainly focus on their work. Therefore, this VSR is considered to have **medium** sensitivity. VP1 is selected to represent the view of this VSR due to similar features of improvement works (**Figure 8.9**).

O3 - Mui Wo School

8.11.21 This VSR refers to the students and staff going to the school. However, people at their workplace would mainly focus on their work, therefore this VSR is considered to have **medium** sensitivity. VP1 is selected to represent the view of this VSR due to similar features of improvement works (**Figure 8.9**).

04 - Lick Hang Kindergarten

8.11.22 This VSR refers to the students and staff going to the school. Being blocked by natural vegetation, the VSR will mainly not see the Works Area. In addition, people at their workplace would mainly focus on their work, therefore this VSR is considered to have **medium** sensitivity. VP1 is selected to represent the view of this VSR due to similar features of improvement works (**Figure 8.9**). The proposed development/ works would not be visible and further assessment is not required due to the considerable distance and blocked by nearby built form.

05 - Mui Wo Municipal Services Building

8.11.23 This VSR refers to the people working at Mui Wo Municipal Services Building. Although the office is tall enough and may have a full view of the Project, people at their workplace would mainly focus on their work. Therefore, this VSR is considered to have **medium** sensitivity. VP1 is selected to represent the view of this VSR due to similar features of improvement works (**Figure 8.9**).

06 - Mui Wo Fire Station

8.11.24 This VSR refers to the people working at Mui Wo Fire Station. Although the office is close to the Works Area and may have a full view of the Project, people at their workplace would mainly focus on their work. Therefore, this VSR is considered to have **medium** sensitivity. VP1 is selected to represent the view of this VSR due to similar features of improvement works (**Figure 8.9**).

Leisure and Cultural Visually Sensitive Receivers (LC1 to LC11)

LC1 - Pak Tai Temple

8.11.25 This VSR refers to the people visiting Pak Tai Temple. The temple is quite far away from the Works Area and is partially blocked by vegetation. Also, the frequency of view is occasional. This VSR is considered to have **medium** sensitivity. VP 1 is selected to represent the view of this VSR due to similar features of improvement works (**Figure 8.9**).

LC2 - Church of Christ in China Mui Wo Church

8.11.26 This VSR refers to the people visiting Church of Christ in China Mui Wo Church. The frequency of view is occasional and their view to the Works Area is blocked by the nearby buildings, therefore this VSR is considered to have **low** sensitivity. No VP is selected to represent the view of this VSR since the Works Area to this VSR are below the surrounding ground level. The proposed development/ works would not be visible and further assessment is not required as it is blocked by nearby built form.

LC3 - Tin Hau Temple

8.11.27 This VSR refers to the people visiting Tin Hau Temple. The temple is surrounded by vegetation. Since the frequency of view is occasional and therefore this VSR is considered to have **medium** sensitivity. VP 2 is selected to represent the view of this VSR (**Figure 8.10**).

LC4 - Hung Shing Temple

8.11.28 This VSR refers to the people visiting this temple. The frequency of view is occasional and, therefore this VSR is considered to have **medium** sensitivity. No VP is selected to represent the view of this VSR since the Works Area to this VSR are below the surrounding ground level.

LC5 - Silvermine Beach Hotel

8.11.29 This VSR refers to the guests visiting this hotel. The hotel is quite far away from the Works Area and is partially blocked by nearby buildings. The frequency of view is occasional and, therefore this VSR is considered to have **medium** sensitivity. No VP is selected to represent the view of this VSR since the Works Area to this VSR are below the surrounding ground level. The proposed development/ works would not be visible and further assessment is not required due to the considerable distance and blocked by nearby built form.

LC6 - Silver Mine Bay Beach

8.11.30 This VSR refers to the guests visiting this beach. The beach is quite far away from the Works Area and is partially blocked by nearby buildings. The frequency of view is occasional and, therefore this VSR is considered to have **medium** sensitivity. No VP is selected to represent the view of this VSR since the Works Area to this VSR are below the surrounding ground level. The proposed development/ works would not be visible and further assessment is not required due to the considerable distance and blocked by nearby built form.

LC7 - Mui Wo Recreation Centre

8.11.31 This VSR refers to the people visiting Mui Wo Recreation Centre. The frequency of view is occasional and their view to the Works Area is blocked by the nearby buildings, therefore this VSR is considered to have **low** sensitivity. No VP is selected to represent the view of this VSR since the Works Area to this VSR are below the surrounding ground level. The proposed development/ works would not be visible and further assessment is not required due to the considerable distance and blocked by nearby built form.

LC8 - Mui Wo Playground

8.11.32 This VSR refers to the people using Mui Wo Playground. The playground borders the Works Area and has a full view of the Project. However, since the frequency of view is occasional, this VSR is considered to have **medium** sensitivity. No VP is selected to represent the view of this VSR since the Works Area to this VSR are below the surrounding ground level.

LC9 - Mui Wo Swimming Pool

8.11.33 This VSR refers to the people using Mui Wo Swimming Pool. The swimming pool borders the Works Area and has a full view of the Project. However, since the frequency of view is occasional, this VSR is considered to have **medium** sensitivity. No VP is selected to represent the view of this VSR since the Works Area to this VSR are below the surrounding ground level.

LC10 - Mui Wo Rural Committee

8.11.34 This VSR refers to the people visiting Mui Wo Rural Committee. The frequency of view is occasional and their view to the Works Area is blocked by the nearby buildings, therefore this VSR is considered to have **low** sensitivity. No VP is selected to represent the view of this VSR since the Works Area to this VSR are below the surrounding ground level. The proposed development/ works would not be visible and further assessment is not required due to the considerable distance and blocked by nearby built form.

LC11 - Mui Wo River Silver Garden

8.11.35 This VSR refers to the people visiting this garden. The frequency of view is occasional and, therefore this VSR is considered to have **medium** sensitivity. No VP is selected to represent the view of this VSR since the Works Area to this VSR are below the surrounding ground level.

Travelling Visually Sensitive Receivers (T1 to T4)

T1 - Travelers along Ngan Shu Street

8.11.36 This VSR includes people travelling on Ngan Shu Street. For much of the road, the view to the Works Area is blocked by roadside developments. Most of this VSR is vehicular. Travelling VSRs are less sensitive in general since views are transient and occasional. The surrounding vegetation will mean these views are partially obscured. No VP is selected to represent the view of this VSR since the Works Area to this VSR are below the surrounding ground level.

T2 Travelers along Tung Wan Tau Road

8.11.37 This VSR includes people travelling on Tung Wan Tau Road which is quite far away from the Works Area. The view to the Works Area is blocked by Silvermine Beach Hotel. Travelling VSRs are less sensitive in general since views are transient and occasional. The surrounding vegetation will mean these views are partially obscured. No VP is

selected to represent the view of this VSR since the Works Area to this VSR are below the surrounding ground level. The proposed development/ works would not be visible and further assessment is not required due to the considerable distance and blocked by nearby vegetation and built form.

T3 Travelers along Old Village Path to Luk Tei Tong

8.11.38 This VSR includes people travelling on Old Village Path to Luk Tei Tong. Travelling VSRs are less sensitive in general since views are transient and occasional. The surrounding vegetation will mean these views are partially obscured. VP2 is selected to represent the view of this VSR (**Figure 8.10**).

T4 Travelers along Islands Nature Heritage Trail - Mui Wo Section

8.11.39 This VSR includes hikers travelling on Islands Nature Heritage Trail - Mui Wo Section that is far away from the Works Area. For much of the road, the view to the Works Area is blocked by natural vegetation. Travelling VSRs are less sensitive in general since views are transient and occasional. The surrounding vegetation will mean these views are partially obscured. No VP is selected to represent the view of this VSR since the Works Area to this VSR are below the surrounding ground level. The proposed development/ works would not be visible and further assessment is not required due to the considerable distance and blocked by nearby vegetation.

8.11.40 A summary of the VSRs along with an analysis of the number of viewers, quality of the existing view, distance from the impact source, alternative views, degree of visibility, frequency of view and sensitivity to change is provided in **Table 8.5**.

Table 8.5 - Details of Visually Sensitive Receivers

Ref.	Representative VP	No. of Individuals (Few / Typical / Many)	Quality of Existing View (Good / Fair / Poor)	Distance with the Works Area (m)	Alternative Views	Degree of Visibility (Glimpse / Partial / Full)	Frequency of View (Frequent / Occasional)	Compatibility of the Project with the Surrounding Landscape (Good / Fair / Poor)	Sensitive to Change (High / Medium / Low)
Residential VSRs									
R1 - Residents of Tai Tei Tong	VP2	Typical	Good	77	Yes	Partial	Frequent	Fair	Medium
R2 - Residents of Nam Bin Wai	VP1	Few	Good	34	Yes	Full	Frequent	Fair	Medium
R3 - Residents of Ma Po Tsuen	VP2	Few	Good	14	Yes	Full	Frequent	Fair	Medium
R4 - Residents of Ling Tsui Tau	VP2	Few	Good	31	Yes	Full	Frequent	Fair	Medium
R5 - Residents of Tsoi Yuen Tsuen	VP2	Few	Good	59	Yes	Partial	Frequent	Fair	Medium
R6 - Residents of Mui Wo Kau Tsuen	VP2	Few	Good	119	Yes	Partial	Frequent	Fair	Medium
R7 - Residents of Chung Hau	N/A	Few	Fair	29	Yes	Partial	Frequent	Fair	Medium
R8 - Residents of Ngan Ho Court	VP1	Typical	Fair	82	Yes	Full	Frequent	Fair	Medium
R9 - Residents of Silver View Centre	VP1	Few	Fair	44	Yes	Full	Frequent	Fair	Medium
R10 - Residents of Silver Waves Court	N/A	Few	Good	222	Yes	Glimpse	Frequent	Fair	Low

Ref.	Representative VP	No. of Individuals (Few / Typical / Many)	Quality of Existing View (Good / Fair / Poor)	Distance with the Works Area (m)	Alternative Views	Degree of Visibility (Glimpse / Partial / Full)	Frequency of View (Frequent / Occasional)	Compatibility of the Project with the Surrounding Landscape (Good / Fair / Poor)	Sensitive to Change (High / Medium / Low)
R11 - Residents of Luk Tei Tong	VP2	Typical	Good	48	Yes	Full	Frequent	Fair	High
R12 - Residents of Sun Lung Wai	VP2	Typical	Good	236	Yes	Glimpse	Frequent	Good	Medium
R13 - Residents of Wang Tong	VP1	Few	Good	242	Yes	Glimpse	Frequent	Fair	Medium
R14 - Residents of Ngan Wan Estate	VP1	Typical	Fair	95	Yes	Full	Frequent	Fair	Medium
R15 - Residents of Ngan Wai Court	VP1	Typical	Fair	139	Yes	Full	Frequent	Fair	Medium
Occupational VSRs									
O1 - Silver Plaza (including Lai Nursing Centre and Chan Shi Sau Memorial Social Service Centre)	VP1	Few	Good	116	Yes	Glimpse	Occasional	Fair	Medium
O2 - Mui Wo Government Office Buildings	VP1	Few	Fair	158	Yes	Full	Occasional	Fair	Medium
O3 - Mui Wo School	VP1	Few	Good	14	Yes	Partial	Occasional	Good	Medium

Ref.	Representative VP	No. of Individuals (Few / Typical / Many)	Quality of Existing View (Good / Fair / Poor)	Distance with the Works Area (m)	Alternative Views	Degree of Visibility (Glimpse / Partial / Full)	Frequency of View (Frequent / Occasional)	Compatibility of the Project with the Surrounding Landscape (Good / Fair / Poor)	Sensitive to Change (High / Medium / Low)
O4 - Lick Hang Kindergarten	VP1	Few	Fair	127	Yes	Glimpse	Occasional	Fair	Medium
O5 - Mui Wo Municipal Services Building	VP1	Few	Fair	28	Yes	Full	Occasional	Fair	Medium
O6 - Mui Wo Fire Station	VP1	Few	Fair	40	Yes	Full	Occasional	Fair	Medium
Leisure and Cultural VSRs									
LC1 - Pak Tai Temple	VP1	Few	Fair	138	Yes	Partial	Occasional	Fair	Medium
LC2 - Church of Christ in China Mui Wo Church	N/A	Few	Fair	57	Yes	Glimpse	Occasional	Fair	Low
LC3 - Tin Hau Temple	VP2	Few	Good	89	Yes	Partial	Occasional	Fair	Medium
LC4 - Hung Shing Temple	N/A	Few	Fair	56	Yes	Partial	Occasional	Fair	Medium
LC5 - Silvermine Beach Hotel	N/A	Few	Good	21	Yes	Glimpse	Occasional	Good	Medium
LC6 - Silver Mine Bay Beach	N/A	Few	Good	182	Yes	Glimpse	Occasional	Good	Medium
LC7 - Mui Wo Recreation Centre	N/A	Few	Fair	421	Yes	Glimpse	Occasional	Fair	Low

Ref.	Representative VP	No. of Individuals (Few / Typical / Many)	Quality of Existing View (Good / Fair / Poor)	Distance with the Works Area (m)	Alternative Views	Degree of Visibility (Glimpse / Partial / Full)	Frequency of View (Frequent / Occasional)	Compatibility of the Project with the Surrounding Landscape (Good / Fair / Poor)	Sensitive to Change (High / Medium / Low)
LC8 - Mui Wo Playground	N/A	Few	Fair	61	Yes	Full	Occasional	Fair	Medium
LC9 - Mui Wo Swimming Pool	N/A	Few	Fair	47	Yes	Full	Occasional	Fair	Medium
LC10 - Mui Wo Rural Committee	N/A	Few	Fair	35	Yes	Glimpse	Occasional	Fair	Low
LC11 - Mui Wo River Silver Garden	N/A	Few	Fair	62	Yes	Partial	Occasional	Fair	Medium
Travelling VSRs									
T1 - Ngan Shu Street	N/A	Few	Fair	Within the Works Area	Yes	Glimpse	Occasional	Fair	Medium
T2 - Tung Wan Tau Road	N/A	Few	Good	488	Yes	Glimpse	Occasional	Good	Medium
T3 - Old Village Path to Luk Tei Tong	VP2	Few	Good	98	Yes	Glimpse	Occasional	Good	Medium
T4 - Islands Nature Heritage Trail - Mui Wo Section	N/A	Few	Good	265	Yes	Glimpse	Occasional	Good	Medium

8.12 Potential Landscape and Visual Impacts

8.12.1 The Project will have various landscape and visual impacts during construction and operation. The proposed channel will create varying levels of impact on the LCAs, LRs and VSRs at different stages of its lifetime as outlined below. Cumulative impacts with other concurrent projects in the area are discussed in **Section 8.13**.

Construction Phase

8.12.2 During the construction phase, major construction activities in the Assessment Area include the construction of stormwater pumping station, construction of diversion box culvert, river improvement works, construction of tidal gate and river revitalisation works. During the construction phase of the Project, potential impacts could therefore result from the following:

- Site clearance and tree removal (felling and transplantation);
- Flow diversion;
- Site formation works for stormwater pumping station;
- Erection of formwork and steel fixing and construction of the proposed channel itself including embankment formation such as filling gabion baskets with rocks in situ;
- Construction of box culverts and tidal gate;
- Construction of proposed cross bridge, stormwater pumping station and tidal gate;
- Landscaping works;
- Presence and operation of construction vehicles and machinery;
- Stockpiling areas; and
- Contractor's temporary Works Areas, including parking areas.

Operation Phase

8.12.3 During the operation phase of the Project, potential impacts will result from the following:

- Operation of tidal gate at channelized River Silver;
- Operation of stormwater pumping station and cross bridge; and
- Landscaping works.

8.13 Landscape Impact Assessment

8.13.1 The magnitude of change on each LCA and LR during construction and operation is detailed below and summarised in **Table 8.6**.

Landscape Character Area

LCA1 – Bay Landscapes at Silver Mine Bay

8.13.2 None of this LCA is affected by the Project and the magnitude of change during construction and operation is therefore **negligible**.

LCA2 – Uplands and Hillsides in West of Mui Wo

8.13.3 None of this LCA is affected by the Project and the magnitude of change during construction and operation is therefore **negligible**.

LCA3 – Rural Inland Plains of Mui Wo and Surrounding Villages

8.13.4 Approximately 3.24 ha of this this LCA is affected by the Project. Approximate 350 nos. trees are identified and 264 nos. of trees will be retained in this LCA. The dominate species are *Celtis sinensis*, *Sapium sebiferum* and *Mallotus paniculatus*, etc. Approximate 86 nos. trees at this LCA will be affected which included 6 nos. of dead trees. The dominant tree species that affected by the Project Works are *Callistemon viminalis* and *Celtis sinensis*. It does cut through this LCA in the middle of the Assessment Area but given the fair compatibility of the Project with the LCA, the magnitude of change is considered to be **intermediate** at both construction and operation.

LCA4 – Rural Township Landscapes at Fu Kong Shan

8.13.5 Only a small part (Approximately 0.29 ha) of this LCA falls within the Project's Assessment Area and being an underground stormwater drain. 16 retain trees are identified in this LCA and the dominant species is *Terminalia catappa*. There is one nos. of tree (*Melaleuca cajuputi subsp. cumingiana*) affected by the Project Works. Given the fair compatibility of the Project with the LCA, the magnitude of change is considered to be **small** during construction phase and **negligible** during operation.

Landscape Resources

LR1 – Secondary Woodland

8.13.6 None of this LR is affected by the Project and the magnitude of change during construction and operation is therefore **negligible**.

LR2 – Shrubland / Grassland

8.13.7 None of this LR is affected by the Project and the magnitude of change during construction and operation is therefore **negligible**.

LR3 - Mangrove

8.13.8 None of this LR is affected by the Project and the magnitude of change during construction and operation is therefore **negligible**.

LR4 - Marsh

8.13.9 The Project affects a small sized area of this LR (Approximately 0.70 ha), along the length of the Works Area. Approximate 130 nos. trees are identified and the dominant species are *Sapium sebiferum* and *Callistemon viminalis*. Approximate 33 nos. of trees at this LR will be affected which included 5 nos. of dead trees. The height of the affected trees ranged from 2 -14m height and DBH ranged from 95-420 mm which the main species is *Callistemon viminalis*. The overall magnitude of change is considered **small**.

8.13.10 During operation, the magnitude of change remains **small**.

LR5 - Agricultural Land

8.13.11 The Project affects a small sized area of this LR (Approximately 1.26 ha), along the length of the Works Area. Approximate 190 nos. trees are identified and the dominant species are *Celtis sinensis*, *Clausena lansium* and *Syzygium jambos*. . Approximate 50 nos. of trees in this LR will be affected which included 1 nos. of dead tree. The height of the affected trees ranged from 3m to 15m while the DBH ranged from 98mm to 320mm. The main tree species will be affected are *Celtis sinensis*. The overall magnitude of change is considered **intermediate**.

8.13.12 During operation, prior to the implementation of mitigations, the vegetation in this LR will still have been changed, and the magnitude of change remains **intermediate**.

LR6 - Plantation

8.13.13 None of this LR is affected by the Project and the magnitude of change during construction and operation is therefore **negligible**.

LR7 - Developed Area

8.13.14 The Project affects a very small area of this LR (Approximately 0.44 ha). Around 50 nos. trees are identified and the dominant species are *Melaleuca cajuputi subsp. cumingiana* and *Terminalia catappa*. Only four (4) nos. of trees in this LR will be affected. The dominant tree species that affected by Project Works are *Melaleuca cajuputi subsp. cumingiana* and *Terminalia catappa*. Given very small area affected and the fair compatibility of the Project with this LR, the magnitude of change during construction is considered to be **small**.

8.13.15 During operation, the magnitude of change is considered to be **negligible** since the project component within this LR is generally inconspicuous.

LR8 - Pond

8.13.16 None of this LR is affected by the Project and the magnitude of change during construction and operation is therefore **negligible**.

LR9 – Semi Natural Watercourse

- 8.13.17 This Project includes the drainage improvement of streams near River Silver, to a small degree (Approximately 0.53 ha) by means of flood wall/ gabion wall/river reprofiling. 7 nos. trees are identified and all will be retained in this LR. During construction, this LR will be slightly modified and the magnitude of change is considered **intermediate**.
- 8.13.18 During operation this LR will be slightly modified. The Project is compatible since the essential function of the watercourse remains and the magnitude of change on this LR are considered **small** during operation.

LR10 – Channelised Watercourse

- 8.13.19 The aim of the Project is to improve drainage and associated facilities at sections of River Silver, to a small degree (Approximately 0.59 ha). 9 nos. trees are identified with dominant species *Sapium sebiferum* and all will be retained in this LR. Although this LR is within the Works Area, it will be minimally modified during construction and the magnitude of change is considered **small**.
- 8.13.20 During operation, this LR will hardly have been modified and the Project is compatible with it, so the magnitude of change on this LR is considered **negligible**.

LR11 – Sandy Shore

- 8.13.21 None of this LR is affected by the Project and the magnitude of change during construction and operation is therefore **negligible**.

LR12 – Sea Water

- 8.13.22 None of this LR is affected by the Project and the magnitude of change during construction and operation is therefore **negligible**.

Significance of Landscape Impacts

- 8.13.23 Using the LR/LCA sensitivities described in **Section 8.7** and the magnitude of changes described in **Section 8.13**, the significance of the landscape impacts have been calculated according to the matrix in **Table 8.1** and are presented in **Table 8.6** below.
- 8.13.24 The impacts before mitigation summarised in **Table 8.7** will be mitigated using measures outlined in **Section 8.15**. **Table 8.10** details which mitigation measures would be appropriate for the impacts on each LR and LCA and presents an assessment of the residual impacts upon mitigation at Day 1 of operation and at Year 10 of operation when soft landscaping measures will have had time to reach their full mitigating potential. It is estimated a total of 87 nos. of trees to be felled in LR4, LR5 and LR7 and detail as stated in **Section 8.13.9, 8.13.11** and **8.13.14**. The proposed locations of compensatory planting are shown in **Figure 8.11a-b**.

- 8.13.25 Focusing on the moderate significant impacts prior to mitigation, one has been identified on an LCA (LCA3 - Rural Inland Plains of Mui Wo and Surrounding Villages) and two LRs have been identified as moderately adverse (LR5 – Agricultural Land and LR9 – Semi Natural Watercourse).
- 8.13.26 Impacts on LR5 – Agricultural Land are regarded as **moderate** prior to mitigation. Approximate 50 nos. of trees in this LR will be affected. The height of the affected trees ranged from 3m to 15m while the DBH ranged from 98mm to 320mm. The main tree species will be affected are *Celtis sinensis*. By implementing the mitigation measures to protect, transplant and compensate for tree, the significance of landscape impacts is considered to be reduced to **slight** at construction and operation day 1. The significance of landscape impacts will be further reduced to **insignificant** at operation year 10.
- 8.13.27 LR9 – Semi Natural Watercourse are vegetated with partially channelised with **medium** sensitivity. During construction, this LR will be slightly modified, and the magnitude of change is considered **intermediate**. Despite this LR will be slightly modified, the essential function of the watercourse remains the same and the magnitude of change is therefore considered **small** during the operation. In this connection, **moderate** impacts are identified prior to mitigation for construction and **slight** impacts are identified during operation day 1. By implementing a number of mitigation measures such as adoption of natural bedding substrate (CM6, OM5). In particular implementing CM6, OM5 means ensuring the riverbed is non-concreted as far as practical. This will enhance the visual and landscape value of the river. Therefore, overall impacts upon implementation of mitigation measures (i.e., residual impacts), are considered **slight** at construction and operation day 1 and **insignificant** by operation year 10 when the natural vegetation will have had time to confer its full mitigation effect.
- 8.13.28 The trees potentially affected in LR4 – Marsh (Approximate 33 nos. trees will be affected. The height of the affected trees ranged from 2 -14m height and DBH ranged from 95-420 mm with the main species *Callistemon viminalis*) are the main reason impacts on this LR at construction and operation are regarded as **slight**. By implementing a number of mitigation measures focusing on these trees, such as the protection and preservation of trees (CM2), transplanting trees as necessary (CM3, OM2) and compensating for trees that are unavoidably removed (CM4, OM3) the significance of impacts on this LR are considered to reduce to **insignificant** at construction and operation day 1. The areas of LR4 affected are peripheral to larger areas of LR4 and/or overall, very small. It is considered that areas provided for compensatory planting will provide similar small clusters of trees along the newly channelized river. Therefore, at operation year 10 when the compensatory trees will have had time to mature and confer their full mitigation effect the impact on this LR is considered to be reduced to **insignificant**.

8.13.29 Significance of residual impacts of all LRs and LCAs during construction and operation day 1 are considered **slight to insignificant**, as presented in **Figure 8.14a&b**, **Figure 8.15a&b** and **Table 8.12**. Significance of residual impacts after operation year 10 on all LRs and LCAs, are considered **insignificant** as shown in **Figure 8.14c**, **Figure 8.15c** and **Table 8.12**.

Table 8.6 - Summary of Magnitude of Change on LCAs and LRs

Landscape Character Areas / Landscape Resources	Sensitivity to Change	Affected by Works Area (ha)	Compatibility of Project (Good / Fair / Low)	Duration of Impacts (Construction/ Operation)	Reversibility of Change (Construction/ Operation)	Magnitude of Change (Large/Intermediate/Small/ Negligible)	
						Construction	Operation
Landscape Character Area							
LCA1 – Bay Landscapes at Sliver Mine Bay	High	N/A	N/A	N/A	N/A	Negligible	Negligible
LCA2 – Uplands and Hillsides in West of Mui Wo	High	N/A	N/A	N/A	N/A	Negligible	Negligible
LCA3 – Rural Inland Plains of Mui Wo and Surrounding Villages	Medium	3.24	Fair	Temporary / Permanent	Reversible / Irreversible	Intermediate	Intermediate
LCA4 – Rural Township Landscapes at Fu Kong Shan	Low	0.29	Fair	Temporary / Permanent	Reversible / Irreversible	Small	Negligible
Landscape Resources							
LR1 – Secondary Woodland	Medium	N/A	N/A	N/A	N/A	Negligible	Negligible
LR2 – Shrubland / Grassland	Medium	N/A	N/A	N/A	N/A	Negligible	Negligible
LR3 – Mangrove	High	N/A	N/A	N/A	N/A	Negligible	Negligible

Landscape Character Areas / Landscape Resources	Sensitivity to Change	Affected by Works Area (ha)	Compatibility of Project (Good / Fair / Low)	Duration of Impacts (Construction/ Operation)	Reversibility of Change (Construction/ Operation)	Magnitude of Change (Large/Intermediate/Small/ Negligible)	
						Construction	Operation
LR4 – Marsh	Medium	0.70	Good	Temporary / Permanent	Reversible / Irreversible	Small	Small
LR5 – Agricultural Land	Medium	1.26	Good	Temporary / Permanent	Reversible / Irreversible	Intermediate	Intermediate
LR6 – Plantation	Medium	N/A	N/A	N/A	N/A	Negligible	Negligible
LR7 – Developed Area	Low	0.44	Good	Temporary	Reversible / Irreversible	Small	Negligible
LR8 – Pond	Medium	N/A	N/A	N/A	N/A	Negligible	Negligible
LR9 – Semi Natural Watercourse	Medium	0.53	Good	Temporary / Permanent	Reversible / Irreversible	Intermediate	Small
LR10 – Channelised Watercourse	Low	0.59	Good	Temporary	Reversible / Irreversible	Small	Negligible
LR11 – Sandy Shore	Medium	N/A	N/A	N/A	N/A	Negligible	Negligible
LR12 – Sea Water	Medium	N/A	N/A	N/A	N/A	Negligible	Negligible

Table 8.7 - Summary of Impact Significance on LRs and LCAs before mitigation

Landscape Resource / Landscape Character Area	Impact Significance BEFORE Mitigation (Significant/Moderate/Slight/Insignificant)	
	Construction	Operation (Day 1)
Landscape Character Areas		
LCA1 - Bay Landscapes at Sliver Mine Bay	Insignificant	Insignificant
LCA2 - Uplands and Hillside in West of Mui Wo	Insignificant	Insignificant
LCA3 - Rural Inland Plains of Mui Wo and Surrounding Villages	Moderate	Moderate
LCA4 - Rural Township Landscapes at Fu Kong Shan	Insignificant	Insignificant
Landscape Resources		
LR1 - Secondary Woodland	Insignificant	Insignificant
LR2 - Shrubland / Grassland	Insignificant	Insignificant
LR3 - Mangrove	Insignificant	Insignificant
LR4 - Marsh	Slight	Slight
LR5 - Agricultural Land	Moderate	Moderate
LR6 - Plantation	Insignificant	Insignificant
LR7 - Developed Area	Insignificant	Insignificant
LR8 - Pond	Insignificant	Insignificant
LR9 - Semi Natural Watercourse	Moderate	Slight
LR10 - Channelised Watercourse	Insignificant	Insignificant
LR11 - Sandy Shore	Insignificant	Insignificant
LR12 - Sea Water	Insignificant	Insignificant

8.14 Visual Impact Assessment

8.14.1 The magnitude of visual change on each VSR during construction and operation, is detailed below and summarised in **Table 8.8**.

Photomontage

- 8.14.2 A total of two VPs have been selected to prepare photomontages. The photomontage (**Figure 8.9 - Figure 8.10**) illustrate the existing conditions, Day 1 of operation without mitigation measures, Day 1 of operation with mitigation measures and Year 10 of operation with mitigation measures. Drawings of stormwater pumping station and section of river revitalization are presented in **Figure 8.12a-e** and **Figure 8.13a** respectively.
- 8.14.3 Apart from the proposed stormwater pumping station and cross bridge, the rest of Project items (i.e. improvement works to tributary sections of River Silver, tidal gate and associated drainage facilities) are all low-lying structures located below surrounding ground level and generally inconspicuous. The use of photomontages as a tool to demonstrate the value of employed mitigation measures at is therefore not appropriate for the other components. Construction of drainage channels and associated drainage facilities are generally thought to be compatible with the surroundings during operation and less so during site clearance and construction works. Largely because of this, visual impacts are often considered more severe during construction compared to operation.

VP Assessment

VP1 Footbridge near Ngan Shu Street

- 8.14.4 This VP is looking towards the proposed stormwater pumping station, cross bridge and proposed flood wall, near Ling Tsui Tau, Nam Bin Wei and Ma Po Tsuen. It is right next to the proposed Works Area and provide an illustration of what the Project might look like for residents of Ling Tsui Tau, Nam Bin Wei and Ma Po Tsuen in close proximity. (**Figure 8.9**).

VP2 Luk Tei Tong Bypass Channel

- 8.14.5 This VP is looking towards the channelized River Silver near Luk Tei Tong. It is right next to the proposed Works Area and provide an illustration of what the Project might look like for residents of Luk Tei Tong in close proximity and residents of Ngan Ho Court, Silver View Centre, Ngan Wai Estate and Ngan Wai Court at elevated view. (**Figure 8.10**).

R2 - Residents of Nam Bin Wai; R4 - Residents of Ling Tsui Tau;

- 8.14.6 During construction before implementation of mitigation, the VSRs in these areas are very close to, if not right next to the Project. Since the improvement works to tributary sections of these receivers are mainly above ground structures which are the proposed stormwater pumping station and cross bridge. The compatibility of the Project with the surrounding abovementioned VSRs' landscape is fair. The magnitude of change for these VSRs is considered to be **intermediate**.
- 8.14.7 During operation before implementation of mitigation, the impact will be less than during construction for these VSRs since all construction vehicles and equipment will

no longer be on site, any stockpiles and temporary structures will have been removed and the channel and associated access/maintenance roads will be completed. The proposed stormwater pumping station at Nam Bin Wai and the gabion wall at the river section associated with the VSRs are illustrated in **Figure 8.9a**. The magnitude of change is considered to be **intermediate**.

R12 - Residents of Sun Lung Wai;

8.14.8 During construction before implementation of mitigation, the VSRs in these areas are very close to, if not right next to the Project. Since the improvement works to tributary sections of these receivers are mainly above ground structures which are the river revitalisation and associated work. The compatibility of the Project with the surrounding abovementioned VSRs' landscape is fair. The magnitude of change for these VSRs is considered to be **intermediate**.

8.14.9 During operation before implementation of mitigation, the impact will be less than during construction for these VSRs since all construction vehicles and equipment will no longer be on site, any stockpiles and temporary structures will have been removed and the channel and associated community facilities will be completed. As illustrated in **Figure 8.10a**, the associated community facilities are designed to be compatible with the surrounding environment. The magnitude of change is considered to be **small**.

R8 - Residents of Ngan Ho Court; R9 - Residents of Silver View Centre; R14 - Residents of Ngan Wan Estate and R15 - Residents of Ngan Wai Court

8.14.10 During construction before implementation of mitigation, the VSRs in these areas are very close to, if not right next to the Project. Since the improvement works to tributary sections of these receivers are mainly above ground structures which are the river revitalisation and associated work. The compatibility of the Project with the surrounding abovementioned VSRs' landscape is fair. The magnitude of change for these VSRs is considered to be **intermediate**.

8.14.11 During operation before implementation of mitigation, the impact will be even less than during construction, with all construction vehicles and equipment no longer on site, any stockpiles and temporary structures removed, and the channel and associated access completed. In addition, the drainage channels are low-lying structures located below surrounding ground level. The view will be hardly discernible. The magnitude of change is considered to be **negligible**.

R1 - Residents of Tai Tei Tong; R3 - Residents of Lei Uk Village; R5 - Residents of Tsoi Yuen Tsuen; R6 - Residents of Mui Wo Kau Tsuen; R11 - Residents of Luk Tei Tong; O1 - Silver Plaza (including Lai Lai Nursing Centre and Chan Shi Sau Memorial Social Service Centre); O3 - Mui Wo School; O4 - Lick Hang Kindergarten; and O6 - Mui Wo Fire Station and LC1 - Pak Tai Temple; LC3 - Tin Hau Temple; T3 - Old Village Path to Luk Tei Tong

8.14.12 During construction before implementation of mitigation, the construction works to the proposed stormwater pumping station and cross bridge are mainly above the

ground level but it will be screened by natural vegetation and other village structures. Considering relatively considerable distance of these VSRs to the pumping station (>200 m), the magnitude of change for these VSRs is considered to be **small**.

- 8.14.13 During operation before implementation of mitigation, the impact will be less than during construction for these VSRs since all construction vehicles and equipment will no longer be on site, any stockpiles and temporary structures will have been removed and the channel will be completed. The magnitude of change is considered to be **small**.

R7 - Residents of Chung Hau; R10 - Residents of Silver Waves Court; R13 - Residents of Wang Tong; O2 - Mui Wo Government Office Buildings; O5 - Mui Wo Municipal Services Building; LC2 - Church of Christ in China Mui Wo Church; LC4 - Hung Shing Temple; LC5 - Silvermine Beach Hotel; LC6 - Silver Mine Bay Beach; LC7 - Mui Wo Recreation Centre; LC8 - Mui Wo Playground; LC9 - Mui Wo Swimming Pool; LC10 - Mui Wo Rural Committee ; LC11 - Mui Wo River Silver Garden; T1 - Ngan Shu Street; T2 - Tung Wan Tau Road ; T4 - Islands Nature Heritage Trail - Mui Wo Section

- 8.14.14 During construction before implementation of mitigation, the VSRs in these areas will hardly notice the Project since the improvement works to the stormwater drain are mainly at and below ground level. In addition, the existing degree of visibility of these VSRs is glimpse. The compatibility of the Project with the surrounding abovementioned VSRs' landscape is fair. Since the VSRs is relatively horizontal to the Works Area due to the low-lying residential building, the magnitude of change for these VSRs is considered to be **small**.

- 8.14.15 During operation before implementation of mitigation, the impact will be even less than during construction, with all construction vehicles and equipment no longer on site, any stockpiles and temporary structures removed, and the channel and associated access completed. In addition, the drainage channels are low-lying structures located below surrounding ground level. The view will be hardly discernible. The magnitude of change is considered to be **negligible**.

Significance of Visual Impact

- 8.14.16 Using the VSR sensitivities described in **Section 8.8** and the magnitude of changes on each VSR ascertained in **Table 8.8** has been used to calculate the significance of visual impacts before mitigation as shown in **Table 8.9**.
- 8.14.17 The impacts before mitigation summarised in **Table 8.9** will be mitigated using measures outlined in **Section 8.11a-b**.

Table 8.8 - Summary of Magnitude of Change on VSRs before Mitigation

VSR Ref	Representative VP	Sensitivity to Change	Closest Viewing Distance to the Project (m)	Scale of the Project when viewed from the VSR (Small / Medium / Large)	Duration of Impacts (Construction / Operation)	Potential Blockage of View (Full/ Partial/ Nil)	Reversibility of Change (Construction/ Operation)	Magnitude of change (Large / Intermediate / Small / Negligible)	
								Construction	Operation
R1 - Residents of Tai Tei Tong	VP2	Medium	77	Small	Temporary/ Permanent	Nil	Partly reversible/ Irreversible	Small	Small
R2 - Residents of Nam Bin Wai	VP1	Medium	34	Medium	Temporary/ Permanent	Partial	Partly reversible/ Irreversible	Intermediate	Intermediate
R3 - Residents of Ma Po Tsuen	VP2	Medium	14	Small	Temporary/ Permanent	Partial	Partly reversible/ Irreversible	Small	Small
R4 - Residents of Ling Tsui Tau	VP2	Medium	31	Medium	Temporary/ Permanent	Partial	Partly reversible/ Irreversible	Intermediate	Intermediate
R5 - Residents of Tsoi Yuen Tsuen	VP2	Medium	59	Small	Temporary/ Permanent	Nil	Partly reversible/ Irreversible	Small	Small
R6 - Residents of Mui Wo Kau Tsuen	VP1	Medium	119	Small	Temporary/ Permanent	Nil	Partly reversible/ Irreversible	Small	Small
R7 - Residents of Chung Hau	N/A	Medium	29	Small	Temporary/ Permanent	Nil	Partly reversible/ Irreversible	Small	Negligible
R8 - Residents of Ngan Ho Court	VP1	Medium	82	Medium	Temporary/ Permanent	Nil	Partly reversible/ Irreversible	Intermediate	Negligible

VSR Ref	Representative VP	Sensitivity to Change	Closest Viewing Distance to the Project (m)	Scale of the Project when viewed from the VSR (Small / Medium / Large)	Duration of Impacts (Construction / Operation)	Potential Blockage of View (Full/ Partial/ Nil)	Reversibility of Change (Construction/ Operation)	Magnitude of change (Large / Intermediate / Small / Negligible)	
								Construction	Operation
R9 - Residents of Silver View Centre	VP1	Medium	44	Medium	Temporary/ Permanent	Nil	Partly reversible/ Irreversible	Intermediate	Negligible
R10 - Residents of Silver Waves Court	N/A	Low	222	Small	Temporary/ Permanent	Nil	Partly reversible/ Irreversible	Small	Negligible
R11 - Residents of Luk Tei Tong	VP2	High	48	Small	Temporary/ Permanent	Nil	Partly reversible/ Irreversible	Small	Small
R12 - Residents of Sun Lung Wai	VP 2	Medium	236	Small	Temporary/ Permanent	Nil	Partly reversible/ Irreversible	Intermediate	Small
R13 - Residents of Wang Tong	N/A	Medium	242	Small	Temporary/ Permanent	Nil	Partly reversible/ Irreversible	Small	Negligible
R14 - Residents of Ngan Wan Estate	VP1	Medium	95	Medium	Temporary/ Permanent	Nil	Partly reversible/ Irreversible	Intermediate	Negligible
R15 - Residents of Ngan Wai Court	VP1	Medium	139	Medium	Temporary/ Permanent	Nil	Partly reversible/ Irreversible	Intermediate	Negligible
O1 - Silver Plaza (including Lai Lai Nursing Centre and Chan Shi Sau)	VP1	Medium	116	Medium	Temporary/ Permanent	Nil	Partly reversible/ Irreversible	Small	Small

VSR Ref	Representative VP	Sensitivity to Change	Closest Viewing Distance to the Project (m)	Scale of the Project when viewed from the VSR (Small / Medium / Large)	Duration of Impacts (Construction / Operation)	Potential Blockage of View (Full/ Partial/ Nil)	Reversibility of Change (Construction/ Operation)	Magnitude of change (Large / Intermediate / Small / Negligible)	
								Construction	Operation
Memorial Social Service Centre)									
O2 - Mui Wo Government Office Buildings	VP1	Medium	158	Small	Temporary/ Permanent	Nil	Partly reversible/ Irreversible	Small	Negligible
O3 - Mui Wo School	VP1	Medium	14	Small	Temporary/ Permanent	Nil	Partly reversible/ Irreversible	Small	Small
O4 - Lick Hang Kindergarten	VP1	Medium	127	Medium	Temporary/ Permanent	Nil	Partly reversible/ Irreversible	Small	Small
O5 - Mui Wo Municipal Services Building	VP1	Medium	28	Small	Temporary/ Permanent	Nil	Partly reversible/ Irreversible	Small	Negligible
O6 - Mui Wo Fire Station	VP1	Medium	40	Small	Temporary/ Permanent	Nil	Partly reversible/ Irreversible	Small	Small
LC1 - Pak Tai Temple	VP1	Medium	138	Small	Temporary/ Permanent	Nil	Partly reversible/ Irreversible	Small	Small
LC2 - Church of Christ in China Mui Wo Church	N/A	Low	57	Small	Temporary/ Permanent	Nil	Partly reversible/ Irreversible	Small	Negligible
LC3 - Tin Hau Temple	N/A	Medium	89	Small	Temporary/ Permanent	Nil	Partly reversible/ Irreversible	Small	Small

VSR Ref	Representative VP	Sensitivity to Change	Closest Viewing Distance to the Project (m)	Scale of the Project when viewed from the VSR (Small / Medium / Large)	Duration of Impacts (Construction / Operation)	Potential Blockage of View (Full/ Partial/ Nil)	Reversibility of Change (Construction/ Operation)	Magnitude of change (Large / Intermediate / Small / Negligible)	
								Construction	Operation
LC4 - Hung Shing Temple	N/A	Medium	56	Small	Temporary/ Permanent	Nil	Partly reversible/ Irreversible	Small	Negligible
LC5 - Silvermine Beach Hotel	N/A	Medium	21	Small	Temporary/ Permanent	Nil	Partly reversible/ Irreversible	Small	Negligible
LC6 - Silver Mine Bay Beach	N/A	Medium	182	Small	Temporary/ Permanent	Nil	Partly reversible/ Irreversible	Small	Negligible
LC7 - Mui Wo Recreation Centre	N/A	Low	421	Small	Temporary/ Permanent	Nil	Partly reversible/ Irreversible	Small	Negligible
LC8 - Mui Wo Playground	N/A	Medium	61	Small	Temporary/ Permanent	Nil	Partly reversible/ Irreversible	Small	Negligible
LC9 - Mui Wo Swimming Pool	N/A	Medium	47	Small	Temporary/ Permanent	Nil	Partly reversible/ Irreversible	Small	Negligible
LC10 - Mui Wo Rural Committee	N/A	Low	35	Small	Temporary/ Permanent	Nil	Partly reversible/ Irreversible	Small	Negligible
LC11 - Mui Wo River Silver Garden	N/A	Medium	62	Small	Temporary/ Permanent	Nil	Partly reversible/ Irreversible	Small	Negligible

VSR Ref	Representative VP	Sensitivity to Change	Closest Viewing Distance to the Project (m)	Scale of the Project when viewed from the VSR (Small / Medium / Large)	Duration of Impacts (Construction / Operation)	Potential Blockage of View (Full/ Partial/ Nil)	Reversibility of Change (Construction/ Operation)	Magnitude of change (Large / Intermediate / Small / Negligible)	
								Construction	Operation
T1 - Ngan Shu Street	N/A	Medium	Within the Works Area	Small	Temporary/ Permanent	Nil	Partly reversible/ Irreversible	Small	Negligible
T2 - Tung Wan Tau Road	N/A	Medium	488	Small	Temporary/ Permanent	Nil	Partly reversible/ Irreversible	Small	Negligible
T3 - Old Village Path to Luk Tei Tong	VP2	Medium	98	Small	Temporary/ Permanent	Nil	Partly reversible/ Irreversible	Small	Small
T4 - Islands Nature Heritage Trail - Mui Wo Section	VP1	Medium	265	Medium	Temporary/ Permanent	Nil	Partly reversible/ Irreversible	Small	Negligible

Table 8.9 - Summary of Impact Significance on VSRs before Mitigation

VSR Ref	Impact Significance BEFORE Mitigation (Significant/Moderate/Slight/Insignificant)	
	Construction	Operation
R1 - Residents of Tai Tei Tong	Slight	Slight
R2 - Residents of Nam Bin Wai	Moderate	Moderate
R3 - Residents of Ma Po Tsuen	Slight	Slight
R4 - Residents of Ling Tsui Tau	Moderate	Moderate
R5 - Residents of Tsoi Yuen Tsuen	Slight	Slight
R6 - Residents of Mui Wo Kau Tsuen	Slight	Slight
R7 - Residents of Chung Hau	Slight	Insignificant
R8 - Residents of Ngan Ho Court	Moderate	Insignificant
R9 - Residents of Silver View Centre	Moderate	Insignificant
R10 - Residents of Silver Waves Court	Insignificant	Insignificant
R11 - Residents of Luk Tei Tong	Moderate	Moderate
R12 - Residents of Sun Lung Wai	Moderate	Slight
R13 - Residents of Wang Tong	Slight	Insignificant
R14 - Residents of Ngan Wan Estate	Moderate	Insignificant
R15 - Residents of Ngan Wai Court	Moderate	Insignificant
O1 - Silver Plaza (including Lai Lai Nursing Centre and Chan Shi Sau Memorial Social Service Centre)	Slight	Slight
O2 - Mui Wo Government Office Buildings	Slight	Insignificant
O3 - Mui Wo School	Slight	Slight
O4 - Lick Hang Kindergarten	Slight	Slight
O5 - Mui Wo Municipal Services Building	Slight	Insignificant
O6 - Mui Wo Fire Station	Slight	Slight
LC1 - Pak Tai Temple	Slight	Slight
LC2 - Church of Christ in China Mui Wo Church	Insignificant	Insignificant
LC3 - Tin Hau Temple	Slight	Slight
LC4 - Hung Shing Temple	Slight	Insignificant
LC5 - Silvermine Beach Hotel	Slight	Insignificant
LC6 - Silver Mine Bay Beach	Slight	Insignificant
LC7 - Mui Wo Recreation Centre	Insignificant	Insignificant
LC8 - Mui Wo Playground	Slight	Insignificant
LC9 - Mui Wo Swimming Pool	Slight	Insignificant
LC10 - Mui Wo Rural Committee	Insignificant	Insignificant
LC11 - Mui Wo River Silver Garden	Slight	Insignificant
T1 - Ngan Shu Street	Slight	Insignificant
T2 - Tung Wan Tau Road	Slight	Insignificant
T3 - Old Village Path to Luk Tei Tong	Slight	Slight
T4 - Islands Nature Heritage Trail - Mui Wo Section	Slight	Insignificant

Note: The source of impacts of VSRs along Ngan Shu Street and Ngan Shek Street are considered generally inconspicuous as the Project components such as the stormwater drain located at and below the surrounding ground level. Hence, the recommended mitigation measures during operation are not available to those VSRs.

8.15 Mitigation Measures

- 8.15.1 Mitigation measures follow the principle of the mitigation hierarchy, which is firstly to undertake all means to avoid impacts, reduce any unavoidable impacts to as low as possible and finally to mitigate any remaining impacts.
- 8.15.2 Mitigation measures are proposed to be considered during design, construction and operation and should be implemented at the earliest feasible stage of the Project.
- 8.15.3 Mitigation measures can be relevant to both construction and operation phases of the Project. For example, detailed design measures will be implemented during construction but will aim to reduce both construction and operation impacts. Equally soft landscape mitigation measures may be implemented during construction, but their full effect will often not be appreciated for 10 years.
- 8.15.4 **Table 8.13** details which mitigation measures would be appropriate for the impacts on each VSR and presents an assessment of the residual impacts upon mitigation at Day 1 of operation and at Year 10 of operation when soft landscaping measures will have had time to reach their full mitigating potential, as illustrated in **Figures 8.9b** and **8.10b**.
- 8.15.5 During construction phase, mitigation measures, namely works planned with care to minimise disturbance (CM1), screening (CM7) and light control (CM8) are generally applicable to all VSRs. A combination of mitigation measures, including the protection and preservation of trees (CM2), transplanting trees as necessary (CM3) and compensating for trees that are unavoidably removed (CM4), buffer planting (CM5), adoption of natural bedding substrate (CM6), and river revitalization and landscape works for infrastructure (CM9), will be applied on particular VSRs with higher sensitivity. The landscape and visual mitigation measures promote greening and environmental beautification and improve the compatibility of the surrounding.
- 8.15.6 During operation phase, lighter colours of structures (OM1), transplanting trees as necessary (OM2), buffer planting (OM4), adoption of natural bedding substrate (OM5), river revitalization and landscape works for infrastructure (OM7) and light control (OM6) largely applicable to most of the VSRs to reduce and compensate the unavoidable visual impacts by incorporating green and eco conservation elements into water feature. The mitigations are not applicable to the VSRs along Ngan Shu Street and Ngan Shek Street because the sources of impacts, namely laying of below-ground drainage pipe are considered generally inconspicuous.
- 8.15.7 During the construction phase with the implementation of the abovementioned mitigation measures, the visual impacts of most of the VSRs is diminished to **negligible**. After implementing the mitigation measures during the construction phase, VSRs which will be more likely to perceive the proposed stormwater pumping station, including the following: the visual impact of R7, R13, O1, O2, O3, O4, O5, O6, LC2 to LC10 and T1 are reduced to **negligible**; the visual impact of R1 to R6, R8, R9, R12, R14 to R15, LC1, LC11, T2 to T4 are reduced to **minor**; the visual impact of R11 is reduced to **moderate**. Apart from R11, their visual impact at Day 1 and Year 10 of operation will be diminished to **negligible** with landscaping measures. Overall, the residual visual impacts are **minor** or **negligible** at Day 1 of operation, with the exception of

residents in R-11 who will have moderate impacts at Day 1 of operation, which will diminish to **minor** residual impacts at Year 10. The detail of the impact significance of all VSRs before and upon mitigations are summarized in **Table 8.13**.

- 8.15.8 **Table 8.10** and **Table 8.11** below outlines the proposed mitigation measures for the Project Funding. The suggested funding, maintenance and management bodies for each measure is included in the table, and these must be agreed before the start of construction. **Figure 8.11a-b** illustrates the landscape and visual mitigation plan.
- 8.15.9 In addition to the mitigation measures listed in **Table 8.10** and **Table 8.11** as a general good site practice uncontaminated excavated topsoil should be stripped and stored for re-use in the construction of the soft landscape works of this Project or other projects.
- 8.15.10 **Table 8.12** and **Table 8.13** respectively summarise the impact significance on LCA, LR and VSR both before and upon mitigation.

Table 8.10 - Proposed Construction Phase Mitigation Measures for Landscape and Visual Impacts

ID No.	Mitigation Measure	Funding Agency	Implementation Agency	Management/ Maintenance Agency
CM1	Minimise Disturbance – temporary structures and construction works should be planned with care to minimise disturbance to vegetation including riparian vegetation along the river as well as existing built structures. The footprint of the Project should be kept to a practical minimum and form, textures and colours selected to be as compatible with the existing surroundings as possible.	DSD	DSD/ Contractor	DSD
CM2	Tree Protection and Preservation – Trees/ woodland within the Works Area will be protected and preserved as far as possible in accordance with DEVB TC(W) No. 04/2020. For example, the Project will be designed to avoid tree felling wherever possible.	DSD	DSD/ Contractor during construction ⁽¹⁾	DSD/ Contractor during construction ⁽¹⁾
CM3	Tree Transplantation – Should removal of trees be unavoidable due to construction impacts, trees will be transplanted or felled ⁽²⁾ according to Clause 3.97 of the General Specification of Civil Engineering Works – Section 3 Landscape Softworks and Establishment Works, including ensuring transplanted trees are treated with establishment works immediately after transplanting works, for a period of no less than 12 months. At the detailed design stage the tree transplantation plan should be refined to ensure the locations proposed to receive the transplanted tree is suitable. Established trees of value are to be re-located where practically feasible. The transplant plan will be included in a detailed landscape design and planting plan, which is recommended to be implemented as early as practicable in the Project timeline.	DSD	DSD/ Contractor	Contractor / DSD and LCSD ⁽³⁾
CM4	Compensatory Tree Planting - Where loss of existing trees is unavoidable, compensatory planting of trees should be provided in accordance with DEVB TC(W) No. 04/2020 to compensate for those trees felled. Implementation of compensatory tree planting will be of a ratio not less than 1:1. Plants will have 12 months to establish. At the detailed design stage the tree compensation and transplantation plan should be refined to confirm the separation distance of the heavy standard compensatory trees and ensure the outlined areas are sufficient for the planting necessary to compensate for the affected trees. The selection of planting species shall be made with reference to the species identified in the Tree Survey and be predominantly native to Hong Kong or the South China region. The compensatory planting will be applied along the proposed river alignment. But the actual implementation will be subject to detailed landscape design and planting plan, and recommended to be implemented as early as practicable in the Project timeline.	DSD	DSD/ Contractor	DSD
CM5	Buffer Planting – Tall screen/buffer trees shall be planted to screen the Luk Tei Tong Bypass Channel and proposed stormwater pumping station. This measure may additionally form part of the compensatory planting and will improve compatibility with the surrounding environment.	DSD	DSD/ Contractor	DSD/ Contractor
CM6	Natural Bedding Substrate – River sediment and / or boulders excavated during river reprofiling works are to be reused at Tai Tei Tong River as natural bedding substrate.	DSD	DSD/ Contractor	DSD/ Contractor
CM7	Screening – Stockpiles of materials should be covered or hoarding erected where possible to reduce undesirable views of the construction site, having consideration for safety and security. It is proposed that screening (via decorative hoarding) 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.	DSD	DSD/ Contractor	DSD/ Contractor
CM8	Light Control – The guidelines in “Charter on External Lighting” and “Guidelines on Industry Best Practices for External Lightning Installations” promulgated by ENB for glare control will be implemented.	DSD	DSD/ Contractor	DSD/ Contractor
CM9	River Revitalization and Landscape Work for Infrastructure – River Revitalization work in terms of planting and provision of leisure facilities will be conduct along Luk Tei Tong Bypass Channel to enhance ecological and amenity value of the surrounding. Native species will be selected for planting and landscape works as far as possible. Environmental friendly material and nature colour will be selected for leisure facilities and other associated facilities / hard landscape. Green roof and corresponding landscape work such as planting of climbers, shrubs and bamboo would be carried out for proposed stormwater pumping station in order to enhance the greenery of proposed structure. A minimum 20% greenery is proposed for the areas within the proposed stormwater pumping station boundary. Vertical planting is also proposed for the boundary fence of the proposed stormwater pumping station. Please refer to Figure 8.11 – Landscape and Visual Mitigation Plan for their location and Figure 8.13a for the section.	DSD	DSD/ Contractor	DSD/ Contractor

⁽¹⁾ This measure is only applicable during construction.

⁽²⁾ 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.

⁽³⁾ Contractor 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.

Table 8.11 - Proposed Operation Phase Mitigation Measures for Landscape and Visual Impacts

ID No.	Mitigation Measure	Funding Agency	Implementation Agency	Management/ Maintenance Agency
OM1	Colours of Structures - Colours for the structures e.g. fences should be chosen to complement the surrounding area. Lighter colours such as shades of light grey, off-white and light brown may be utilised where technically feasible to reduce the visibility of the structures.	DSD	DSD/ Contractor	DSD
OM2	Tree Transplantation – Should removal of trees be unavoidable due to construction impacts, trees will be transplanted or felled ⁽¹⁾ according to Clause 3.97 of the General Specification of Civil Engineering Works – Section 3 Landscape Softworks and Establishment Works, including ensuring transplanted trees are treated with establishment works immediately after transplanting works, for a period of no less than 12 months. At the detailed design stage the tree transplantation plan should be refined to ensure the locations proposed to receive the transplanted tree is suitable. Established trees of value are to be re-located where practically feasible. The transplant planting will be included in a detailed landscape design and planting plan, which is recommended to be implemented as early as practicable in the Project timeline.	DSD	DSD/ Contractor	Contractor / DSD and LCSD ⁽²⁾
OM3	Compensatory Tree Planting - Where loss of existing trees is unavoidable, compensatory planting of trees should be provided in accordance with DEVB TC(W) No. 04/2020 to compensate for those trees felled. Implementation of compensatory tree planting will be of a ratio not less than 1:1. Plants will have 12 months to establish. At the detailed design stage the tree compensation and transplantation plan should be refined to confirm the separation distance of the heavy standard compensatory trees and ensure the outlined areas are sufficient for the planting necessary to compensate for the affected trees. The selection of planting species shall be made with reference to the species identified in the Tree Survey and be predominantly native to Hong Kong or the South China region. The compensatory planting will be applied along the proposed river alignment. But the actual implementation will be subject to detailed landscape design and planting plan, and recommended to be implemented as early as practicable in the Project timeline.	DSD	DSD/ Contractor	DSD
OM4	Buffer Planting – Tall screen/buffer trees shall be planted to screen the Luk Tei Tong Bypass Channel and proposed stormwater pumping station. This measure may additionally form part of the compensatory planting and will improve compatibility with the surrounding environment.	DSD	DSD/ Contractor	DSD/ Contractor
OM5	Natural Bedding Substrate – River sediment and / or boulders excavated during river reprofiling works are to be reused at Tai Tei Tong River as natural bedding substrate..	DSD	DSD/ Contractor	DSD/ Contractor
OM6	Light Control – The guidelines in “Charter on External Lighting” and “Guidelines on Industry Best Practices for External Lightning Installations” promulgated by ENB for glare control will be implemented.	DSD	DSD/ Contractor	DSD/ Contractor
OM7	River Revitalization and Landscape Work for Infrastructure – River Revitalization work in terms of planting and provision of leisure facilities will be conduct along Luk Tei Tong Bypass Channel to enhance ecological and amenity value of the surrounding. Native species will be selected for planting and landscape works as far as possible. Environmental friendly material and nature colour will be selected for leisure facilities and other associated facilities / hard landscape. Green roof and corresponding landscape work such as planting of climbers, shrubs and bamboo would be carried out for proposed stormwater pumping station in order to enhance the greenery of proposed structure. A minimum 20% greenery is proposed for the areas within the proposed stormwater pumping station boundary. Vertical planting is also proposed for the boundary fence of the proposed stormwater pumping station. Please refer to Figure 8.11 – Landscape and Visual Mitigation Plan for their location and Figure 8.13a for the section.	DSD	DSD/ Contractor	DSD/ Contractor

(1) 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.

(2) Contractor 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.

Table 8.12- Summary of Impact Significance on LRs and LCAs, both before and upon mitigation

Landscape Resource / Landscape Character Area	Sensitivity (Low, Medium, High)	Magnitude of Change BEFORE Mitigation (Negligible, Small, Intermediate, Large)		Impact Significance BEFORE Mitigation (Significant/Moderate/Slight/Insignificant)		Recommended Mitigation Measures		Residual Impact Significance UPON Mitigation (Significant/Moderate/Slight/Insignificant)		
		Construction	Operation	Construction	Operation	Construction	Operation	Construction	Operation Day 1	Operation Year 10
Landscape Character Areas										
LCA 1 - Bay Landscapes at Sliver Mine Bay	High	Negligible	Negligible	Insignificant	Insignificant	N/A	N/A	Insignificant	Insignificant	Insignificant
LCA 2 - Uplands and Hillside in West of Mui Wo	High	Negligible	Negligible	Insignificant	Insignificant	N/A	N/A	Insignificant	Insignificant	Insignificant
LCA 3 - Rural Inland Plains of Mui Wo and Surrounding Villages	Medium	Intermediate	Intermediate	Moderate	Moderate	CM2, CM3, CM4, CM8	OM1, OM2, OM3, OM7	Slight	Slight	Insignificant
LCA 4 - Rural Township Landscapes at Fu Kong Shan	Low	Small	Negligible	Insignificant	Insignificant	CM2, CM3, CM4, CM8	N/A	Insignificant	Insignificant	Insignificant
Landscape Resources										
LR 1 - Secondary Woodland	Medium	Negligible	Negligible	Insignificant	Insignificant	N/A	N/A	Insignificant	Insignificant	Insignificant
LR 2 - Shrubland / Grassland	Medium	Negligible	Negligible	Insignificant	Insignificant	N/A	N/A	Insignificant	Insignificant	Insignificant
LR 3 - Mangrove	High	Negligible	Negligible	Insignificant	Insignificant	N/A	N/A	Insignificant	Insignificant	Insignificant
LR 4 - Marsh	Medium	Small	Small	Slight	Slight	CM2, CM3, CM4, CM8	OM1, OM2, OM3, OM7	Insignificant	Insignificant	Insignificant
LR 5 - Agricultural Land	Medium	Intermediate	Intermediate	Moderate	Moderate	CM2, CM3, CM4, CM8	OM1, OM2, OM3, OM7	Slight	Slight	Insignificant
LR 6 - Plantation	Medium	Negligible	Negligible	Insignificant	Insignificant	N/A	N/A	Insignificant	Insignificant	Insignificant
LR 7 - Developed Area	Low	Small	Negligible	Insignificant	Insignificant	N/A	N/A	Insignificant	Insignificant	Insignificant
LR 8 - Pond	Medium	Negligible	Negligible	Insignificant	Insignificant	N/A	N/A	Insignificant	Insignificant	Insignificant
LR 9 - Semi Natural Watercourse	Medium	Intermediate	Small	Moderate	Slight	CM6, CM7	OM1, OM2, OM3, OM5	Slight	Slight	Insignificant
LR 10 - Channelised Watercourse	Low	Small	Negligible	Insignificant	Insignificant	N/A	N/A	Insignificant	Insignificant	Insignificant
LR 11 - Sandy Shore	Medium	Negligible	Negligible	Insignificant	Insignificant	N/A	N/A	Insignificant	Insignificant	Insignificant
LR 12 - Sea Water	Medium	Negligible	Negligible	Insignificant	Insignificant	N/A	N/A	Insignificant	Insignificant	Insignificant

Table 8.13- Summary of Impact Significance on VSRs, both before and upon mitigation

VSR Ref.	Sensitivity (Low, Medium, High)	Magnitude of Change BEFORE Mitigation (Negligible, Small, Intermediate, Large)		Impact Significance BEFORE Mitigation (Significant/Moderate/Slight/Insignificant)		Recommended Mitigation Measures		Residual Impact Significance UPON Mitigation (Significant/Moderate/Slight/Insignificant)		
		Construction	Operation	Construction	Operation	Construction	Operation	Construction	Operation Day 1	Operation Yr 10
R1 - Residents of Tai Tei Tong	Medium	Small	Small	Slight	Slight	CM1, CM7, CM8, CM9	OM1, OM2, OM3, OM4, OM5, OM6, OM7	Insignificant	Insignificant	Insignificant
R2 - Residents of Nam Bin Wai	Medium	Intermediate	Intermediate	Moderate	Moderate	CM1, CM2, CM3, CM7, CM8, CM9	OM1, OM2, OM3, OM4, OM5, OM6, OM7	Slight	Slight	Slight
R3 - Residents of Ma Po Tsuen	Medium	Small	Small	Slight	Slight	CM1, CM2, CM3, CM7, CM8, CM9	OM1, OM2, OM3, OM4, OM5, OM6, OM7	Insignificant	Insignificant	Insignificant
R4 - Residents of Ling Tsui Tau	Medium	Intermediate	Intermediate	Moderate	Moderate	CM1, CM7, CM8, CM9	OM1, OM2, OM3, OM4, OM5, OM6, OM7	Slight	Slight	Insignificant
R5 - Residents of Tsoi Yuen Tsuen	Medium	Small	Small	Slight	Slight	CM1, CM7, CM8, CM9	OM1, OM2, OM3, OM4, OM5, OM6, OM7	Insignificant	Insignificant	Insignificant
R6 - Residents of Mui Wo Kau Tsuen	Medium	Small	Small	Slight	Slight	CM1, CM7, CM8, CM9	OM1, OM2, OM3, OM4, OM5, OM6, OM7	Insignificant	Insignificant	Insignificant
R7 - Residents of Chung Hau	Medium	Small	Negligible	Slight	Insignificant	CM1, CM7, CM8, CM9	N/A	Insignificant	Insignificant	Insignificant
R8 - Residents of Ngan Ho Court	Medium	Intermediate	Negligible	Moderate	Insignificant	CM1, CM7, CM8, CM9	N/A	Slight	Insignificant	Insignificant
R9 - Residents of Silver View Centre	Medium	Intermediate	Negligible	Moderate	Insignificant	CM1, CM7, CM8, CM9	N/A	Slight	Insignificant	Insignificant
R10 - Residents of Silver Waves Court	Low	Small	Negligible	Insignificant	Insignificant	CM1, CM7, CM8, CM9	N/A	Insignificant	Insignificant	Insignificant
R11 - Residents of Luk Tei Tong	High	Small	Small	Moderate	Moderate	CM2, CM3, CM4, CM6, CM7	OM1, OM2, OM3, OM4, OM5, OM6, OM7	Slight	Slight	Insignificant
R12 - Residents of Sun Lung Wai	Medium	Intermediate	Small	Moderate	Slight	CM1, CM7, CM8, CM9	OM1, OM2, OM3, OM4, OM5, OM6, OM7	Slight	Insignificant	Insignificant
R13 - Residents of Wang Tong	Medium	Small	Negligible	Slight	Insignificant	CM1, CM7, CM8, CM9	N/A	Insignificant	Insignificant	Insignificant
R14 - Residents of Ngan Wan Estate	Medium	Intermediate	Negligible	Moderate	Insignificant	CM1, CM7, CM8, CM9	N/A	Slight	Insignificant	Insignificant
R15 - Residents of	Medium	Intermediate	Negligible	Moderate	Insignificant	CM1, CM7, CM8, CM9	N/A	Slight	Insignificant	Insignificant

VSR Ref.	Sensitivity (Low, Medium, High)	Magnitude of Change BEFORE Mitigation (Negligible, Small, Intermediate, Large)		Impact Significance BEFORE Mitigation (Significant/Moderate/Slight/Insignificant)		Recommended Mitigation Measures		Residual Impact Significance UPON Mitigation (Significant/Moderate/Slight/Insignificant)		
		Construction	Operation	Construction	Operation	Construction	Operation	Construction	Operation Day 1	Operation Yr 10
Ngan Wai Court										
O1 - Silver Plaza (including Lai Lai Nursing Centre and Chan Shi Sau Memorial Social Service Centre)	Medium	Small	Small	Slight	Slight	CM1, CM7, CM8, CM9	OM1, OM2, OM3, OM4, OM5, OM6, OM7	Insignificant	Insignificant	Insignificant
O2 - Mui Wo Government Office Buildings	Medium	Small	Negligible	Slight	Insignificant	CM1, CM7, CM8, CM9	N/A	Insignificant	Insignificant	Insignificant
O3 - Mui Wo School	Medium	Small	Small	Slight	Slight	CM1, CM7, CM8, CM9	OM1, OM2, OM3, OM4, OM5, OM6, OM7	Insignificant	Insignificant	Insignificant
O4 - Lick Hang Kindergarten	Medium	Small	Small	Slight	Slight	CM1, CM7, CM8, CM9	OM1, OM2, OM3, OM4, OM5, OM6, OM7	Insignificant	Insignificant	Insignificant
O5 - Mui Wo Municipal Services Building	Medium	Small	Negligible	Slight	Insignificant	CM1, CM7, CM8, CM9	N/A	Insignificant	Insignificant	Insignificant
O6 - Mui Wo Fire Station	Medium	Small	Small	Slight	Slight	CM1, CM7, CM8, CM9	OM1, OM2, OM3, OM4, OM5, OM6, OM7	Insignificant	Insignificant	Insignificant
LC1 - Pak Tai Temple	Medium	Small	Small	Slight	Slight	CM1, CM7, CM8, CM9	OM1, OM2, OM3, OM4, OM5, OM6, OM7	Insignificant	Insignificant	Insignificant
LC2 - Church of Christ in China Mui Wo Church	Low	Small	Negligible	Insignificant	Insignificant	CM1, CM7, CM8, CM9	N/A	Insignificant	Insignificant	Insignificant
LC3 - Tin Hau Temple	Medium	Small	Small	Slight	Slight	CM1, CM7, CM8, CM9	OM1, OM2, OM3, OM4, OM5, OM6, OM7	Insignificant	Insignificant	Insignificant
LC4 - Hung Shing Temple	Medium	Small	Negligible	Slight	Insignificant	CM1, CM7, CM8, CM9	N/A	Insignificant	Insignificant	Insignificant
LC5 - Silvermine Beach Hotel	Medium	Small	Negligible	Slight	Insignificant	CM1, CM7, CM8, CM9	N/A	Insignificant	Insignificant	Insignificant
LC6 - Silver Mine Bay Beach	Medium	Small	Negligible	Slight	Insignificant	CM1, CM7, CM8, CM9	N/A	Insignificant	Insignificant	Insignificant
LC7 - Mui Wo Recreation Centre	Low	Small	Negligible	Insignificant	Insignificant	CM1, CM7, CM8, CM9	N/A	Insignificant	Insignificant	Insignificant
LC8 - Mui Wo Playground	Medium	Small	Negligible	Slight	Insignificant	CM1, CM7, CM8, CM9	N/A	Insignificant	Insignificant	Insignificant
LC9 - Mui Wo Swimming Pool	Medium	Small	Negligible	Slight	Insignificant	CM1, CM7, CM8, CM9	N/A	Insignificant	Insignificant	Insignificant

VSR Ref.	Sensitivity (Low, Medium, High)	Magnitude of Change BEFORE Mitigation (Negligible, Small, Intermediate, Large)		Impact Significance BEFORE Mitigation (Significant/Moderate/Slight/Insignificant)		Recommended Mitigation Measures		Residual Impact Significance UPON Mitigation (Significant/Moderate/Slight/Insignificant)		
		Construction	Operation	Construction	Operation	Construction	Operation	Construction	Operation Day 1	Operation Yr 10
LC10 - Mui Wo Rural Committee	Low	Small	Negligible	Insignificant	Insignificant	CM1, CM7, CM8, CM9	N/A	Insignificant	Insignificant	Insignificant
LC11 - Mui Wo River Silver Garden	Medium	Small	Negligible	Slight	Insignificant	CM1, CM7, CM8, CM9	N/A	Insignificant	Insignificant	Insignificant
T1 - Ngan Shu Street	Medium	Small	Negligible	Slight	Insignificant	CM1, CM7, CM8, CM9	N/A	Insignificant	Insignificant	Insignificant
T2 - Tung Wan Tau Road	Medium	Small	Negligible	Slight	Insignificant	CM1, CM7, CM8, CM9	OM1, OM2, OM3, OM4, OM5, OM6, OM7	Insignificant	Insignificant	Insignificant
T3 - Old Village Path to Luk Tei Tong	Medium	Small	Small	Slight	Slight	CM1, CM7, CM8, CM9	N/A	Insignificant	Slight	Slight
T4 - Islands Nature Heritage Trail - Mui Wo Section	Medium	Small	Small	Slight	Insignificant	CM1, CM7, CM8, CM9	OM1, OM2, OM3, OM4, OM5, OM6, OM7	Insignificant	Insignificant	Insignificant

Note:
The source of impacts of VSRs along Ngan Shu Street and Ngan Shek Street are considered generally inconspicuous as the Project components such as the stormwater drain located at and below the surrounding ground level. Hence, the recommended mitigation measures during operation are not available to those VSRs.

8.16 Cumulative Impact

8.16.1 Referring to the latest information provided by DSD on the interfacing projects, the major scopes include desilting works at River Silver, Mui Wo. With implementation of control measures during construction, no major adverse impact is anticipated. Considered the scale and nature of the cumulative project, no major adverse cumulative impact would be anticipated. To further minimise the potential cumulative impacts during construction phase, it is recommended that the contractor shall plan the Works Area of the close proximity work sections which will not overlap with the works area of interfacing project as far as practical.

8.17 Conclusion

8.17.1 Residual landscape impacts are **slight** on LCA3, LR5 and LR9 in during Construction and Operation at Day 1, and **insignificant** on all other LRs and LCAs. Approximately 87 nos. of trees will be affected and proposed to be felled by this Project but these will be adequately compensated for with compensatory planting of not less than 1:1 ratio within the Works Area. Therefore, the estimated nos. of compensatory tree planting will be 87 nos. subjected to the detail design. Although LCA3 (Rural Inland Plains of Mui Wo and Surrounding Villages), LR5 (Agricultural Land) and LR9 (Semi Natural Watercourse) will be affected by the Project, the residual impacts are considered **slight** during construction and Operation at Day 1 and become **insignificant** during Operation at Year 10 with proper implementation of the recommended mitigation measures.

8.17.2 Overall, residual visual impacts are **slight** or **insignificant** at Day 1 of operation, and **slight** to **insignificant** residual impacts at Year 10.

8.17.3 By operation, construction equipment will have been removed and earthworks completed. Therefore, with sensitive architectural design of the structures, tree planting and careful design of lighting, residual visual impacts would further reduce landscape and visual impact at Day 1 of operation. The new structures are expected to blend into the surrounding environment, with denser vegetation at Year 10.

8.17.4 According to Annex 10 of the EIAO-TM, following the introduction of landscape and visual mitigation measures, the Landscape and Visual Impacts of this Project, are considered acceptable with mitigation measures.

8.18 Environmental Monitoring & Audit

8.18.1 This Section defines the Environmental Monitoring and Audit (EM&A) requirements that have been recommended to ensure that the proposed landscape and visual mitigation measures are effectively implemented.

Construction Phase

8.18.2 The landscape and visual mitigation measures proposed shall be incorporated in the Construction Contract.

8.18.3 Site inspections and audits should be undertaken regularly during the construction

phase of the Project to ensure that the proposed mitigation measures and good site practices proposed to manage and mitigate landscape and visual impacts, are implemented.

Operational Phase

- 8.18.4 A specialist landscape subcontractor should be employed for the implementation of tree and landscape works and subsequent maintenance operations during the establishment period.
- 8.18.5 Site audits should be undertaken bi-monthly for 12 months establishment period during the operation phase to check that the proposed landscape and visual mitigation measures are properly implemented and maintained as per their intended objectives.
- 8.18.6 After the 12-months establishment period for soft landscaping, standard maintenance will be required to ensure mitigation measures to retain their full efficacy.

8.19 Bibliography

English

- 8.19.1 Agreement No. CE 89/2017 (DS) Drainage Improvement Works in Ta Kwu Ling - Investigation, Design and Construction for Drainage Services Department, Hong Kong: Government of the HKSAR.

Map

- 8.19.2 Town Planning Board, S/I-MWF/10 Mui Wo Fringe Outline Zoning Plan.
- 8.19.3 Town Planning Board, S/I-MWN/2 Mui Wo North Outline Zoning Plan.
- 8.19.4 Town Planning Board, S/SLC/21 South Lantau Coast Outline Zoning Plan.