




**Landscape and Visual (L&V) Monitoring Report for
Harbour Area Treatment Scheme Stage 2A
(Operational Phase) (April 2022)**

Report No.: OT_2022005

Prepared by :  _____

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1. Introduction

1.1. Background

1.1.1. Bestwise – Sun Fook Kong Joint Venture (the Contractors) appointed 3NV Technology Limited (3NV) to undertake the Landscape and Visual Monitoring for the Operational Phase of the “Enhancement of Deodourisation System at Stonecutters Island Sewage Treatment Works” (hereafter referred to as “the Project”).

1.1.2. The Project is part of the Harbour Area Treatment Scheme (HATS) Stage 2A. According to Environmental Permit No. EP-322/2008/G issued on 9th May 2014 by the Environmental Protection Department (hereinafter called EPD) to the Drainage Services Department (hereinafter called the DSD) as the Permit Holder and the EM&A Manual for the HATS Stage 2A, all landscape and visual mitigation measures shall be monitored monthly on-site during the first year of the Operational Phase at 8 preliminary treatment works (PTW) and the Stonecutters Island Sewage Treatment Works (SCISTW).

1.2. Objectives

1.2.1. The objective is to monitor and audit the contractor’s landscape works, in particular, to ensure the existing trees retained on-site are being well preserved, tree transplanting and felling operations are being undertaken in accordance with the requirements, procedures, and specifications as stipulated in the contract and the approvals granted by concerned authorities, and all the newly planted vegetations are being maintained properly during the establishment period.

2. Landscape and Visual (L&V)

2.1. Monitoring Requirement

Under the EM&A Manual, Landscape and Visual Monitoring audit should be undertaken during the first year of the Operational Phase to ensure and check that the implementation and maintenance of landscape and visual mitigation measures are carried out by a Registered Landscape Architect (RLA).

2.2. Monitoring Frequency

2.2.1. Site inspections should be undertaken once every month through the first year of the Operational Phase.

2.3. Monitoring Locations

2.3.1. Under this Project, there are 8 PTW and SCISTW that should be monitored. The details of the monitoring location are summarized in **Table 1.1**.

Table 1.1 L&V Monitoring Locations

No.	Description
1	North Point PTW
2	Wan Chai East PTW
3	Central PTW
4	Sandy Bay PTW
5	Cyberport PTW
6	Wah Fu PTW
7	Aberdeen PTW
8	Ap Lei Chau PTW
9	Stonecutter Island PTW

2.4. Monitoring Methodology

2.4.1. A Registered Landscape Architect is employed to monitor and audit the contractor's landscape works, in particular, to ensure the existing trees retained on-site are being well preserved, tree transplanting and felling operations are being undertaken in accordance with the requirements, procedures, and specifications as stipulated in the contract and the approvals granted by concerned authorities, and all the newly planted vegetations are being maintained properly during the establishment period by complete a checklist.

3. L&V Monitoring Result

3.1. Inspection Result

3.1.1. No visible irregularities were found. The completed checklist is shown in **Appendix A.**

3.2. Result Discussion

3.2.1. Generally, all L&V mitigation measures listed in EM&A were applied at 8 PTWs and SCISTW. The Contractor is reminded to carry out proper maintenance on plantings and to increase the frequency of watering at 8 PTWs and SCISTW. For Aberdeen PTW, it is also recommended to monitor the conditions of the pruned trees closely. For Cyberport PTW, it is also recommended to apply fertilizer periodically. For Wan Chai East PTW, it is also recommended to provide adequate protection to trees adjacent to works area.

3.2.2. Dead foliage was found in some trees/shrubs at SCISTW. It is recommended to carry out horticultural maintenance. Besides, the vigor of some existing trees (e.g. T110) were found in poor condition and an increase on frequency of tree inspection or risk assessment may be required.

Appendix A

L&V Checklist

Landscape and Visual Impact Assessment Checklist for Site Audit – North Point PTW

Inspection Date: 28 April, 2022
Time: 10:00 am

Weather: Sunny/ Fine/ Cloudy / Rainy
Wind: Strong/ Breeze/ Light/ -Calm

Item	Description	Yes	No	N/A	Actions / Remarks
1	Aesthetic design of the façade of PTW and associated structures to harmonize with the surrounding settings				
1.1	Is the aesthetic design match the surrounding environment?	✓			
1.2	Are the buildings maintained properly that do not cause any visual impact?	✓			
2	Shrub and Climbing Plants to soften proposed structures / Roof Greening / Vertical Greening				
2.1	Is the roof greening maintained properly?			✓	
2.2	Is the vertical greening maintained properly?			✓	
2.3	Are the Shrub and Climbing Plants free from sign of deterioration of health?	✓			
3	Buffer Tree and Shrub Planting to screen proposed associated structures				
3.1	Are the health of those buffer trees and shrub plantings generally in order?	✓			
3.2	Is all new planting maintained properly to ensure further establishment?	✓			
4	Reinstatement of disturbed area				
4.1	Are the compensated planting covered the disturbed area?			✓	
5	Others				
5.1	Are existing trees retained on-site are being well preserved?	✓			
5.2	Are newly planted vegetations are being generally maintained during the establishment period (12 months)?	✓			

Summary / Remarks:

Follow up action taken by Contractor for previous comments:

- No visible irregularities were found

The contractor was reminded to rectify the following:

- N/A

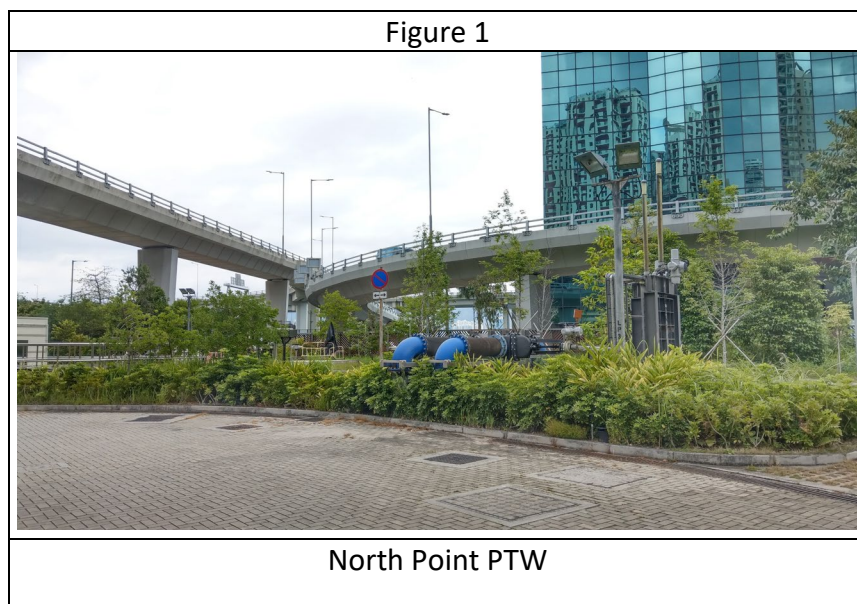
New Observation:

- N/A

Reminders:

- Contractor was reminded to carry out proper maintenance to plantings and was recommended to increase the frequency of watering.

Photo Record:



Signature:

		Signature	Date
Inspected & Recorded by	Registered Landscape Architect	<i>Xylem#</i>	4 th May 2022

Landscape and Visual Impact Assessment Checklist for Site Audit – Ap Lei Chau PTW

Inspection Date: 28 April, 2022
Time: 10:35am

Weather: Sunny/ Fine/ Cloudy/ Rainy
Wind: Strong/ Breeze/ Light/ Calm

Item	Description	Yes	No	N/A	Actions / Remarks
1	Aesthetic design of the façade of PTW and associated structures to harmonize with the surrounding settings				
1.1	Is the aesthetic design match the surrounding environment?	✓			
1.2	Are the buildings maintained properly that do not cause any visual impact?	✓			
2	Shrub and Climbing Plants to soften proposed structures / Roof Greening / Vertical Greening				
2.1	Is the roof greening maintained properly?	✓			
2.2	Is the vertical greening maintained properly?			✓	
2.3	Are the Shrub and Climbing Plants free from sign of deterioration of health?	✓			
3	Buffer Tree and Shrub Planting to screen proposed associated structures				
3.1	Are the health of those buffer trees and shrub plantings generally in order?	✓			
3.2	Is all new planting maintained properly to ensure further establishment?	✓			
4	Reinstatement of disturbed area				
4.1	Are the compensated planting covered the disturbed area?			✓	
5	Others				
5.1	Are existing trees retained on-site are being well preserved?	✓			
5.2	Are newly planted vegetations are being generally maintained during the establishment period (12 months)?	✓			

Summary / Remarks:

Follow up action taken by Contractor for previous comments:

- No visible irregularities were found

The contractor was reminded to rectify the following:

- N/A

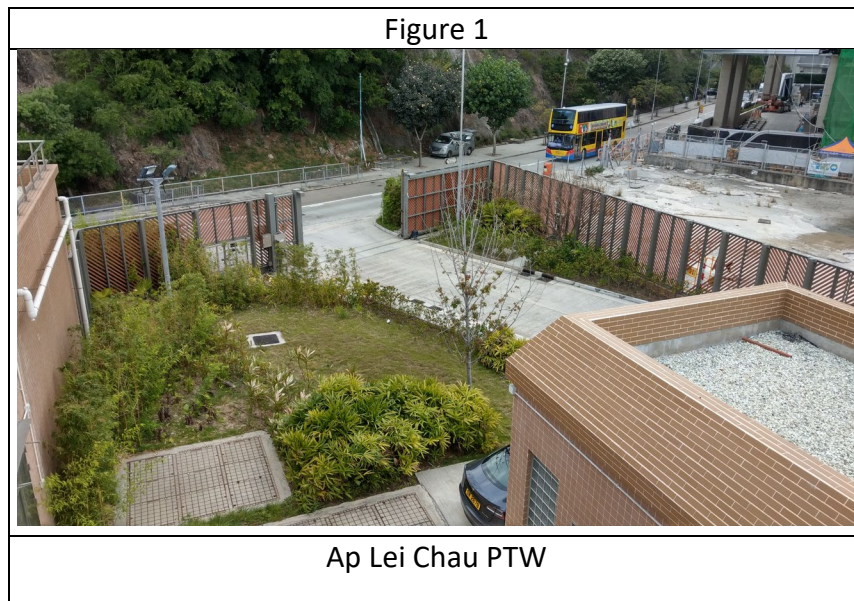
New Observation:

- N/A

Reminders:

- Contractor was reminded to carry out proper maintenance to plantings and recommended to increase the frequency of watering.

Photo Record:



Signature:

		Signature	Date
Inspected & Recorded by	Registered Landscape Architect	<i>Xylem</i> #	4 th May 2022

Landscape and Visual Impact Assessment Checklist for Site Audit – Wah Fu PTW

Inspection Date: 28 April, 2022
Time: 10:58 am

Weather: Sunny/ Fine/ Cloudy/ Rainy
Wind: Strong/ Breeze/ Light/ Calm

Item	Description	Yes	No	N/A	Actions / Remarks
1	Aesthetic design of the façade of PTW and associated structures to harmonize with the surrounding settings				
1.1	Is the aesthetic design match the surrounding environment?	✓			
1.2	Are the buildings maintained properly that do not cause any visual impact?	✓			
2	Shrub and Climbing Plants to soften proposed structures / Roof Greening / Vertical Greening				
2.1	Is the roof greening maintained properly?			✓	
2.2	Is the vertical greening maintained properly?			✓	
2.3	Are the Shrub and Climbing Plants free from sign of deterioration of health?	✓			
3	Buffer Tree and Shrub Planting to screen proposed associated structures				
3.1	Are the health of those buffer trees and shrub plantings generally in order?	✓			
3.2	Is all new planting maintained properly to ensure further establishment?	✓			
4	Reinstatement of disturbed area				
4.1	Are the compensated planting covered the disturbed area?			✓	
5	Others				
5.1	Are existing trees retained on-site are being well preserved?	✓			
5.2	Are newly planted vegetations are being generally maintained during the establishment period (12 months)?	✓			

Summary / Remarks:

Follow up action taken by Contractor for previous comments:

- No visible irregularities were found

The contractor was reminded to rectify the following:

- N/A

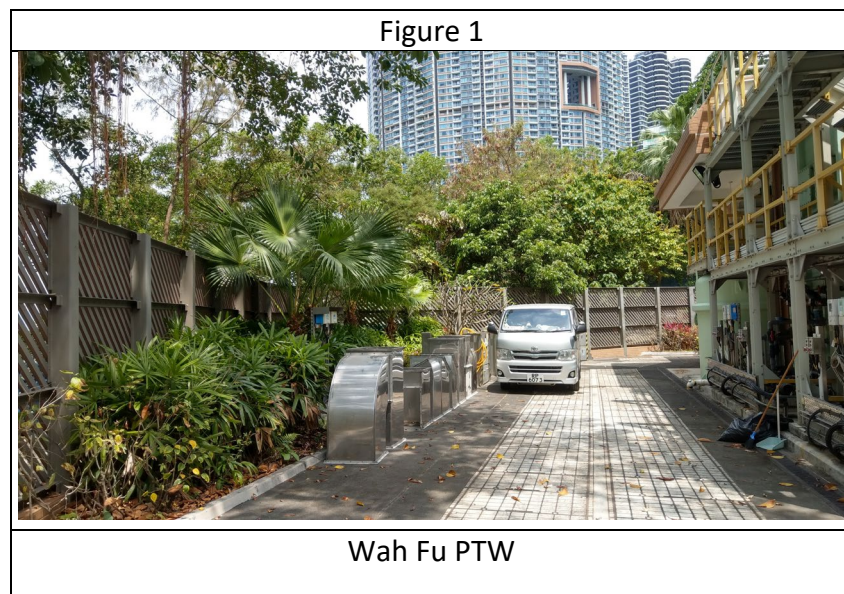
New Observation:

- N/A

Reminders:

- Contractor was reminded to carry out proper maintenance to plantings and recommended to increase the frequency of watering.

Photo Record:



Signature:

		Signature	Date
Inspected & Recorded by	Registered Landscape Architect	<i>Xylem</i> #	4 th May 2022

Landscape and Visual Impact Assessment Checklist for Site Audit – Aberdeen PTW

Inspection Date: 28 April, 2022
Time: 10:47 am

Weather: Sunny/ Fine/ Cloudy/ Rainy
Wind: Strong/ Breeze/ Light/ Calm

Item	Description	Yes	No	N/A	Actions / Remarks
1	Aesthetic design of the façade of PTW and associated structures to harmonize with the surrounding settings				
1.1	Is the aesthetic design match the surrounding environment?	✓			
1.2	Are the buildings maintained properly that do not cause any visual impact?	✓			
2	Shrub and Climbing Plants to soften proposed structures / Roof Greening / Vertical Greening				
2.1	Is the roof greening maintained properly?			✓	
2.2	Is the vertical greening maintained properly?			✓	
2.3	Are the Shrub and Climbing Plants free from sign of deterioration of health?	✓			
3	Buffer Tree and Shrub Planting to screen proposed associated structures				
3.1	Are the health of those buffer trees and shrub plantings generally in order?	✓			
3.2	Is all new planting maintained properly to ensure further establishment?	✓			
4	Reinstatement of disturbed area				
4.1	Are the compensated planting covered the disturbed area?			✓	
5	Others				
5.1	Are existing trees retained on-site are being well preserved?	✓			
5.2	Are newly planted vegetations are being generally maintained during the establishment period (12 months)?	✓			

Summary / Remarks:

Follow up action taken by Contractor for previous comments:

- No visible irregularities were found

The contractor was reminded to rectify the following:

- N/A

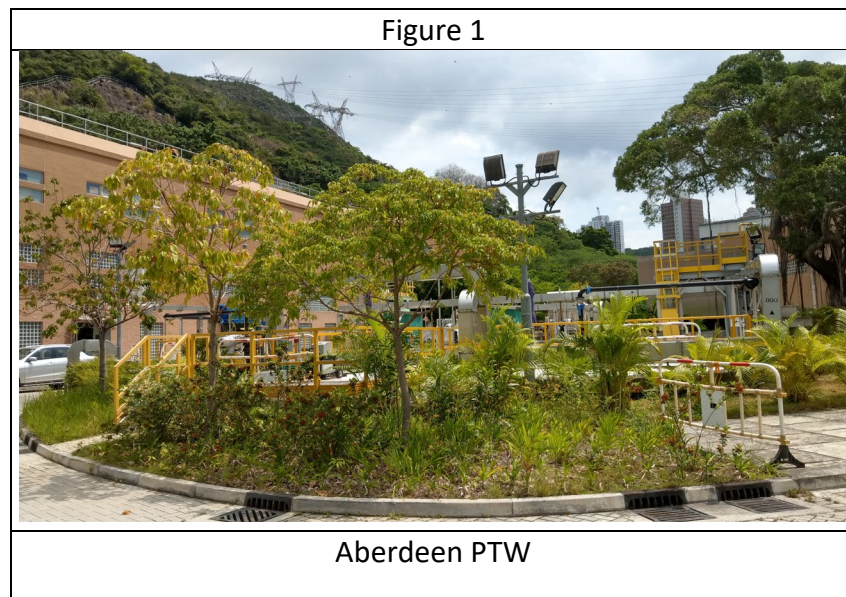
New Observation:

- N/A

Reminders:

- Contractor was reminded to carry out proper maintenance to plantings and recommended to closely monitor the conditions of the pruned trees. It is also recommended to increase the frequency of watering.

Photo Record:



Signature:

		Signature	Date
Inspected & Recorded by	Registered Landscape Architect	<i>Xylem</i> #	4 th May 2022

Landscape and Visual Impact Assessment Checklist for Site Audit – Cyberport PTW

Inspection Date: 28 April, 2022
Time: 11:11 am

Weather: Sunny/ Fine/ Cloudy/ Rainy
Wind: Strong/ Breeze/ Light/ Calm

Item	Description	Yes	No	N/A	Actions / Remarks
1	Aesthetic design of the façade of PTW and associated structures to harmonize with the surrounding settings				
1.1	Is the aesthetic design match the surrounding environment?	✓			
1.2	Are the buildings maintained properly that do not cause any visual impact?	✓			
2	Shrub and Climbing Plants to soften proposed structures / Roof Greening / Vertical Greening				
2.1	Is the roof greening maintained properly?	✓			
2.2	Is the vertical greening maintained properly?			✓	
2.3	Are the Shrub and Climbing Plants free from sign of deterioration of health?	✓			
3	Buffer Tree and Shrub Planting to screen proposed associated structures				
3.1	Are the health of those buffer trees and shrub plantings generally in order?	✓			
3.2	Is all new planting maintained properly to ensure further establishment?	✓			
4	Reinstatement of disturbed area				
4.1	Are the compensated planting covered the disturbed area?			✓	
5	Others				
5.1	Are existing trees retained on-site are being well preserved?	✓			
5.2	Are newly planted vegetations are being generally maintained during the establishment period (12 months)?	✓			

Summary / Remarks:

Follow up action taken by Contractor for previous comments:

- No visible irregularities were found

The contractor was reminded to rectify the following:

- N/A

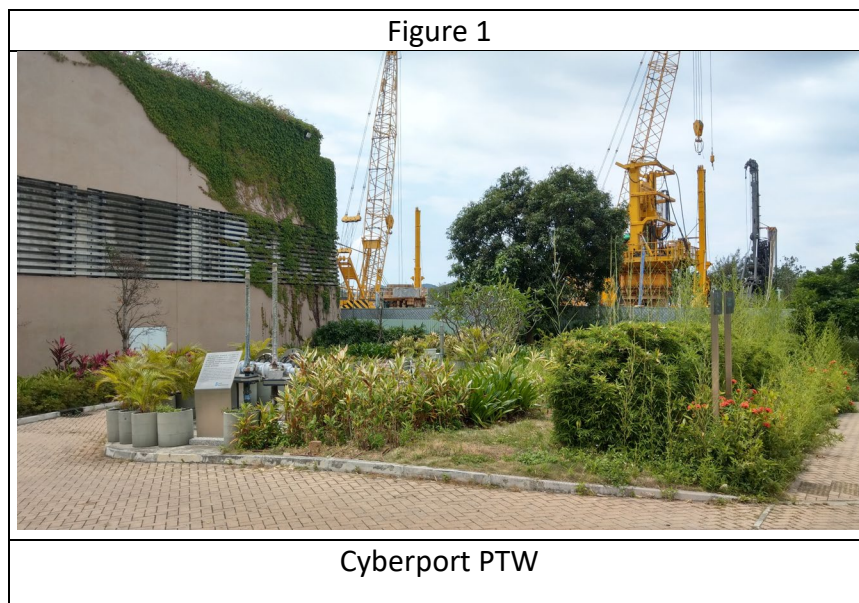
New Observation:

- N/A

Reminders:

- Contractor was reminded to carry out proper maintenance to plantings and removal of weeds. It is also recommended to increase the frequency of watering and apply fertilizer periodically.

Photo Record:



Signature:

		Signature	Date
Inspected & Recorded by	Registered Landscape Architect	<i>Xylem#</i>	4 th May 2022

Landscape and Visual Impact Assessment Checklist for Site Audit – Sandy Bay PTW

Inspection Date: 28 April, 2022

Weather: Sunny/ Fine/ Cloudy/ Rainy

Time: 11:18 pm

Wind: Strong/ Breeze/ Light/ -Calm

Item	Description	Yes	No	N/A	Actions / Remarks
1	Aesthetic design of the façade of PTW and associated structures to harmonize with the surrounding settings				
1.1	Is the aesthetic design match the surrounding environment?	✓			
1.2	Are the buildings maintained properly that do not cause any visual impact?	✓			
2	Shrub and Climbing Plants to soften proposed structures / Roof Greening / Vertical Greening				
2.1	Is the roof greening maintained properly?			✓	
2.2	Is the vertical greening maintained properly?			✓	
2.3	Are the Shrub and Climbing Plants free from sign of deterioration of health?	✓			
3	Buffer Tree and Shrub Planting to screen proposed associated structures				
3.1	Are the health of those buffer trees and shrub plantings generally in order?	✓			
3.2	Is all new planting maintained properly to ensure further establishment?	✓			
4	Reinstatement of disturbed area				
4.1	Are the compensated planting covered the disturbed area?			✓	
5	Others				
5.1	Are existing trees retained on-site are being well preserved?	✓			
5.2	Are newly planted vegetations are being generally maintained during the establishment period (12 months)?	✓			

Summary / Remarks:

Follow up action taken by Contractor for previous comments:

- No visible irregularities were found

The contractor was reminded to rectify the following:

- N/A

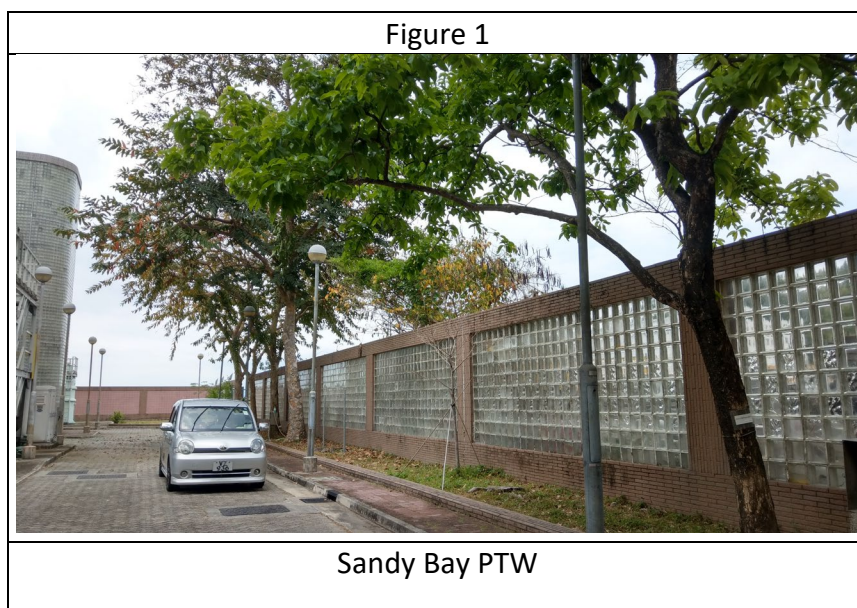
New Observation:

- N/A

Reminders:

- Contractor was reminded to carry out proper maintenance to plantings and recommended to increase the frequency of watering.

Photo Record:



Signature:

		Signature	Date
Inspected & Recorded by	Registered Landscape Architect	<i>Xylem#</i>	4 th May 2022

Landscape and Visual Impact Assessment Checklist for Site Audit – Central PTW

Inspection Date: 28 April, 2022

Weather: Sunny/ Fine/ Cloudy/ Rainy

Time: 11:35 pm

Wind: Strong/ Breeze/ Light/ Calm

Item	Description	Yes	No	N/A	Actions / Remarks
1	Aesthetic design of the façade of PTW and associated structures to harmonize with the surrounding settings				
1.1	Is the aesthetic design match the surrounding environment?	✓			
1.2	Are the buildings maintained properly that do not cause any visual impact?	✓			
2	Shrub and Climbing Plants to soften proposed structures / Roof Greening / Vertical Greening				
2.1	Is the roof greening maintained properly?	✓			
2.2	Is the vertical greening maintained properly?			✓	
2.3	Are the Shrub and Climbing Plants free from sign of deterioration of health?	✓			
3	Buffer Tree and Shrub Planting to screen proposed associated structures				
3.1	Are the health of those buffer trees and shrub plantings generally in order?	✓			
3.2	Is all new planting maintained properly to ensure further establishment?	✓			
4	Reinstatement of disturbed area				
4.1	Are the compensated planting covered the disturbed area?			✓	
5	Others				
5.1	Are existing trees retained on-site are being well preserved?	✓			
5.2	Are newly planted vegetations are being generally maintained during the establishment period (12 months)?	✓			

Summary / Remarks:

Follow up action taken by Contractor for previous comments:

- No visible irregularities were found

The contractor was reminded to rectify the following:

- N/A

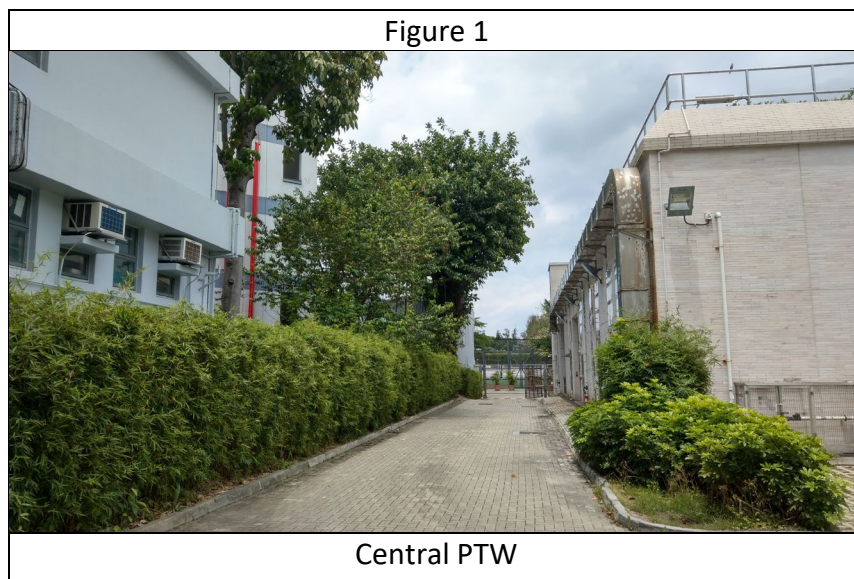
New Observation:

- N/A

Reminders:

- Contractor was reminded to carry out proper maintenance to plantings.

Photo Record:



Signature:

		Signature	Date
Inspected & Recorded by	Registered Landscape Architect	<i>Xylem</i> #	4 th May 2022

Landscape and Visual Impact Assessment Checklist for Site Audit – Wan Chai East PTW

Inspection Date: 28 April, 2022

Weather: Sunny/ Fine/ Cloudy / Rainy

Time: 12:00 pm

Wind: Strong/ Breeze/ Light/ -Calm

Item	Description	Yes	No	N/A	Actions / Remarks
1	Aesthetic design of the façade of PTW and associated structures to harmonize with the surrounding settings				
1.1	Is the aesthetic design match the surrounding environment?	✓			
1.2	Are the buildings maintained properly that do not cause any visual impact?	✓			
2	Shrub and Climbing Plants to soften proposed structures / Roof Greening / Vertical Greening				
2.1	Is the roof greening maintained properly?	✓			
2.2	Is the vertical greening maintained properly?			✓	
2.3	Are the Shrub and Climbing Plants free from sign of deterioration of health?	✓			
3	Buffer Tree and Shrub Planting to screen proposed associated structures				
3.1	Are the health of those buffer trees and shrub plantings generally in order?	✓			
3.2	Is all new planting maintained properly to ensure further establishment?	✓			
4	Reinstatement of disturbed area				
4.1	Are the compensated planting covered the disturbed area?			✓	
5	Others				
5.1	Are existing trees retained on-site are being well preserved?	✓			
5.2	Are newly planted vegetations are being generally maintained during the establishment period (12 months)?	✓			

Summary / Remarks:

Follow up action taken by Contractor for previous comments:

- No visible irregularities were found

The contractor was reminded to rectify the following:

- N/A

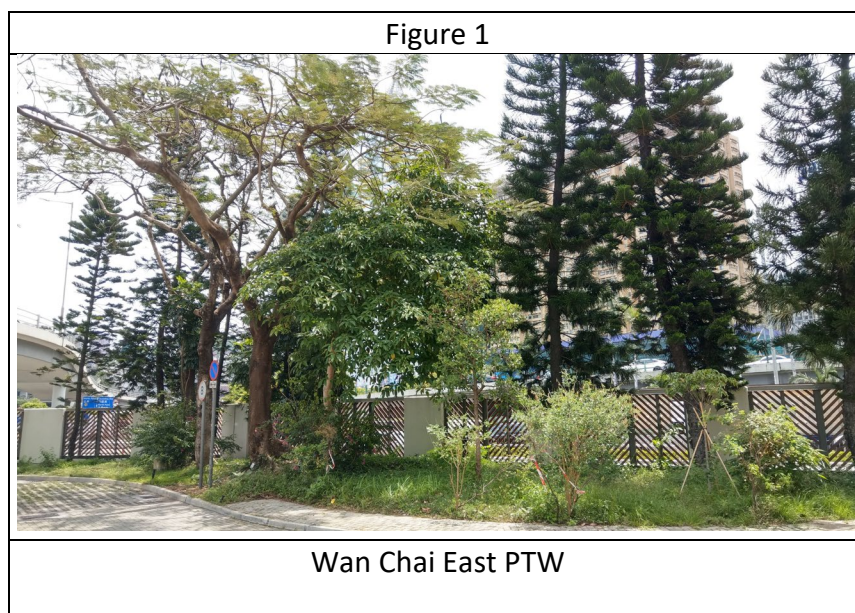
New Observation:

- N/A

Reminders:

- Contractor was reminded to carry out proper maintenance to plantings and recommended to provide adequate protection to trees adjacent to works area.

Photo Record:



Signature:

		Signature	Date
Inspected & Recorded by	Registered Landscape Architect	<i>Xylem#</i>	4 th May 2022

Landscape and Visual Impact Assessment Checklist for Site Audit – Stonecutters PTW

Inspection Date: 28 April, 2022
Time: 12:35 pm

Weather: Sunny/ Fine/ Cloudy/ Rainy
Wind: Strong/ Breeze/ Light/ Calm

Item	Description	Yes	No	N/A	Actions / Remarks
1	Aesthetic design of the façade of PTW and associated structures to harmonize with the surrounding settings				
1.1	Is the aesthetic design match the surrounding environment?	✓			
1.2	Are the buildings maintained properly that do not cause any visual impact?	✓			
2	Shrub and Climbing Plants to soften proposed structures / Roof Greening / Vertical Greening				
2.1	Is the roof greening maintained properly?	✓			
2.2	Is the vertical greening maintained properly?			✓	
2.3	Are the Shrub and Climbing Plants free from sign of deterioration of health?	✓			
3	Buffer Tree and Shrub Planting to screen proposed associated structures				
3.1	Are the health of those buffer trees and shrub plantings generally in order?	✓			
3.2	Is all new planting maintained properly to ensure further establishment?	✓			
4	Reinstatement of disturbed area				
4.1	Are the compensated planting covered the disturbed area?			✓	
5	Others				
5.1	Are existing trees retained on-site are being well preserved?	✓			
5.2	Are newly planted vegetations are being generally maintained during the establishment period (12 months)?	✓			

Summary / Remarks:

Follow up action taken by Contractor for previous comments:

- No visible irregularities were found

The contractor was reminded to rectify the following:

- N/A




New Observation:

- N/A

Reminders:

- dead foliage are found in some trees/shrubs. horticultural maintenance is required.
- vigour of some existing trees (e.g.T110) are found to be poor. close monitoring or tree risk assessment may be required.

Photo Record:

<p style="text-align: center;">Figure 1</p> 	<p style="text-align: center;">Figure 3</p> 
<p style="text-align: center;">Stonecutters Island PTW</p>	
<p style="text-align: center;">Figure 2</p>	
	
<p style="text-align: center;">Stonecutters Island PTW</p>	<p style="text-align: center;">Stonecutters Island PTW</p>

Signature:

		Signature	Date
Inspected & Recorded by	Registered Landscape Architect	<i>Xylem#</i>	4 th May 2022