

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

Report No.: OT_2022008

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



TABLE OF CONTENTS

1.	Introduction	1
1.1.	Background	1
1.2.	Objectives	1
2.	Landscape and Visual (L&V)	1
2.1.	Monitoring Requirement	1
2.2.	Monitoring Frequency	1
2.3.	Monitoring Locations	2
2.4.	Monitoring Methodology	2
3.	L&V Monitoring Result	3
3.1.	Inspection Result	3
3.2.	Result Discussion	3

LIST OF TABLES

Table 1.1 L&V Monitoring Location

Table 3.1 Summary of Reminders and observations for the 8 PTWs and SCISTW

LIST OF APPENDICES

Appendix A L&V Checklist



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. Five new observations were found at Central PTW, Sandy Bay PTW, Wah Fu PTW and Stonecutter Island PTW. 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. **Table 3.1** summarized the reminders and new observations of the 8 PTWs and SCISTW.

Table 3.1 Summary of Reminders and New Observations for the 8 PTWs and SCISTW

	2CI21M					
Monitoring Location	Reminders	New Observations				
	1. Carry out proper					
North Point	maintenance to plantings	,				
PTW	2. Increase the frequency of	N/A				
	watering					
	1. Carry out proper					
Wan Chai East	maintenance to plantings	21/2				
PTW	2. Increase the frequency of	N/A				
	watering					
	1. Carry out proper	1. Poor condition of				
	maintenance to plantings	tree was observed.				
Central PTW	2. Carry out remedial action or					
	tree replacement of the					
	unhealthy marked tree					
	1. Carry out proper	1. Poor condition of				
	maintenance to plantings	tree was observed.				
	2. Increase the frequency of					
Sandy Bay PTW	watering					
	3. Carry out remedial action or					
	tree replacement of the					
	unhealthy marked tree					
Cyberport PTW	1. Increase the frequency of	N/A				



	watering
	watering
	2. Increase the maintenance of
	pot plants
	1. Carry out proper 1. The condition of
	maintenance to plantings the tree for its
	2. Increase the frequency of large quantities of
Wah Fu PTW	watering wilted leaves close
	3. Close monitor on the to top of the tree
	condition of the marked tree crown.
	1. Carry out proper
	, , ,
	maintenance to plantings
	2. Increase the frequency of
Aberdeen PTW	watering N/A
	3. Closely monitor the
	conditions of the pruned
	trees
	1. Carry out proper
Ap Lei Chau	maintenance to plantings
PTW	2. Increase the frequency of
	watering
	Close monitoring or tree risk
	assessment may be required adjacent to trees
	' ' '
<u> </u>	especially for trees T110 & T110 & T109 are
Stonecutter	T109 severely tilted.
Island PTW	2. Review the situation and to 2. Some tree
	remove the trees by the branches span
	maintenance party to over driveway.
	reduce the safety risk

- End of Report -



Appendix A

L&V Checklist



<u>Landscape and Visual Impact Assessment Checklist for Site Audit – North Point PTW</u>

Inspection Date: 24 June, 2022 Weather: Sunny/ Fine/ Cloudy / Rainy
Time: 10:15 am 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	1			
	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)?				



Follow up action taken by Contractor for previous comments:

- No visible irregularities were found

The contractor was reminded to rectify the following:

- N/A

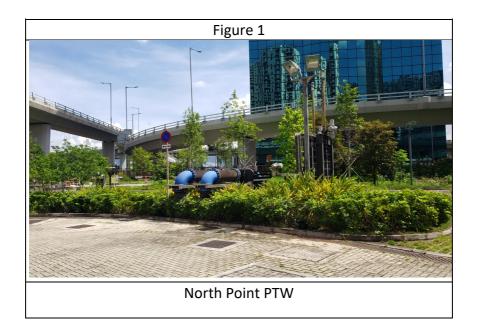
New Observation:

- 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	Date
Inspected & Recorded by	Registered Landscape Architect	Xylem*	4 th July 2022



<u>Landscape and Visual Impact Assessment Checklist for Site Audit – Ap Lei Chau PTW</u>

Inspection Date: 24 June, 2022 Weather: Sunny/ Fine/-Cloudy / Rainy
Time: 11:05am 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)?				



Follow up action taken by Contractor for previous comments:

- No visible irregularities were found

The contractor was reminded to rectify the following:

- N/A

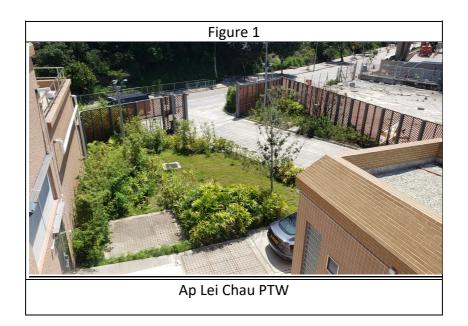
New Observation:

- N/A

Reminders:

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

Photo Record:



		Signature	Date
Inspected & Recorded by	Registered Landscape Architect	Xylem*	4 th July 2022



<u>Landscape and Visual Impact Assessment Checklist for Site Audit – Wah Fu PTW</u>

Inspection Date: 24 June, 2022 Weather: Sunny/ Fine/ Cloudy / Rainy

Time: 11:15 am Wind: <u>Strong/ Breeze/ Light/</u>

Item	Description	Yes	No	N/A	Actions / Remarks
1	Aesthetic design of the façade of PTW and				
	associated structures to harmonize with				
1.1	the surrounding settings Is the aesthetic design match the				
1.1	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			✓	
2.3	properly? Are the Shrub and Climbing Plants free from				
2.5	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?			V	
5	Others				
5.1	Are existing trees retained on-site are being well preserved?		√		Refer to new observation no.1
5.2	Are newly planted vegetations are being generally maintained during the establishment period (12 months)?		✓		Refer to new observation no.1



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:

1. The condition of the tree (shown in Figure 2) for its large quantities of wilted leaves close to top of the tree crown. The Contractor is recommended to carry out remedial action and close monitoring

Reminders:

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

Photo Record:



		Signature	Date
Inspected & Recorded by	Registered Landscape Architect	Xylem*	4 th July 2022



<u>Landscape and Visual Impact Assessment Checklist for Site Audit – Aberdeen PTW</u>

Inspection Date: 24 June, 2022 Weather: <u>Sunny/ Fine/-Cloudy / Rainy</u>
Time: 11:05 am Wind: <u>Strong/ Breeze/ Light/Calm</u>

Item	Description	Yes	No	N/A	Actions / Remarks
1	Aesthetic design of the façade of PTW and				
	associated structures to harmonize with				
1 1	the surrounding settings				
1.1	Is the aesthetic design match the	✓			
1.2	surrounding environment? Are the buildings maintained properly that				
1.2	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			1	
_	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)?				



Follow up action taken by Contractor for previous comments:

- No visible irregularities were found

The contractor was reminded to rectify the following:

- N/A

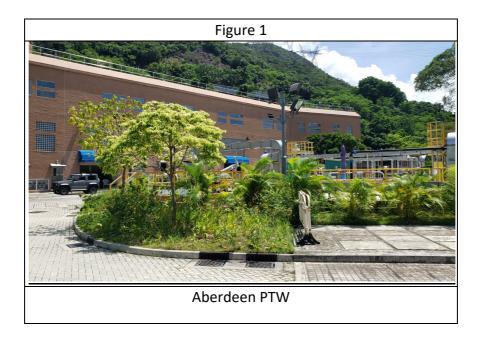
New Observation:

- 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.
- Pruning of trees has been followed up as previously recommended.

Photo Record:



		Signature	Date
Inspected & Recorded by	Registered Landscape Architect	Xylem*	4 th July 2022



<u>Landscape and Visual Impact Assessment Checklist for Site Audit – Cyberport PTW</u>

Inspection Date: 24 June, 2022 Weather: Sunny/ Fine/-Cloudy / Rainy
Time: 11:26 am 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)?				



Follow up action taken by Contractor for previous comments:

- No visible irregularities were found

The contractor was reminded to rectify the following:

- N/A

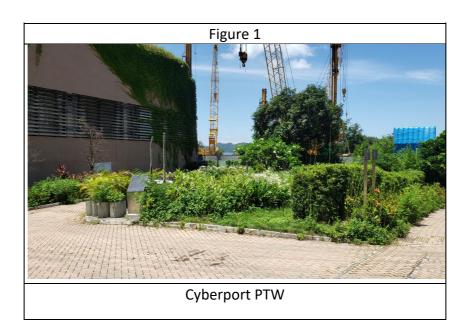
New Observation:

- N/A

Reminders:

- The general housekeeping has been improved. Contractor was recommended to increase the frequency of watering. It is also recommended to increase the maintenance of pot plants.

Photo Record:



		Signature	Date
Inspected & Recorded by	Registered Landscape Architect	Xylem*	4 th July 2022



<u>Landscape and Visual Impact Assessment Checklist for Site Audit – Sandy Bay PTW</u>

Inspection Date: 24 June, 2022 Weather: <u>Sunny/ Fine/ Cloudy/ Rainy</u>
Time: 11:32 pm Wind: <u>Strong/ Breeze/ Light/ Calm</u>

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?			V	
2.3	Are the Shrub and Climbing Plants free from	√			
	sign of deterioration of health?	V			
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		√		Refer to new
	well preserved?		V		observation no.1
5.2	Are newly planted vegetations are being				Refer to new
	generally maintained during the		✓		observation no.1
	establishment period (12 months)?				55561 (461011 110.1



Follow up action taken by Contractor for previous comments:

- No visible irregularities were found

The contractor was reminded to rectify the following:

- N/A

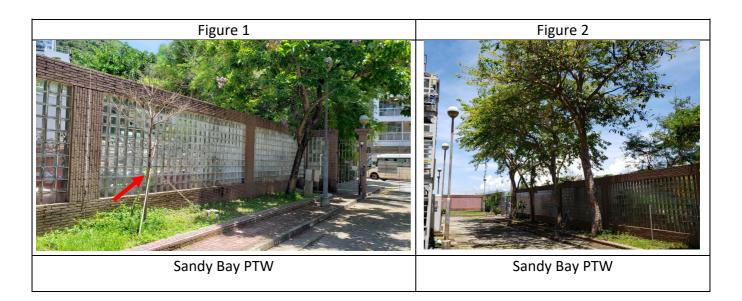
New Observation:

1. The health condition of marked tree (shown in Figure 2) is poor. The Contractor is recommended to carry out remedial action or tree replacement.

Reminders:

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

Photo Record:



		Signature	Date
Inspected & Recorded by	Registered Landscape Architect	Xylem#	4 th July 2022



<u>Landscape and Visual Impact Assessment Checklist for Site Audit – Central PTW</u>

Inspection Date: 24 June, 2022 Weather: Sunny/Fine/-Cloudy/Rainy
Time: 11:49 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	1			
	surrounding environment?				
1.2	Are the buildings maintained properly that	1			
	do not cause any visual impact?	V			
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			1	
	properly?			'	
2.3	Are the Shrub and Climbing Plants free from	1			
	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	1			
	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		√		Refer to new
	well preserved?				observation no.1
5.2	Are newly planted vegetations are being				Refer to new
	ρ ,	the	✓		observation no.1
	establishment period (12 months)?				



Follow up action taken by Contractor for previous comments:

- No visible irregularities were found

The contractor was reminded to rectify the following:

- N/A

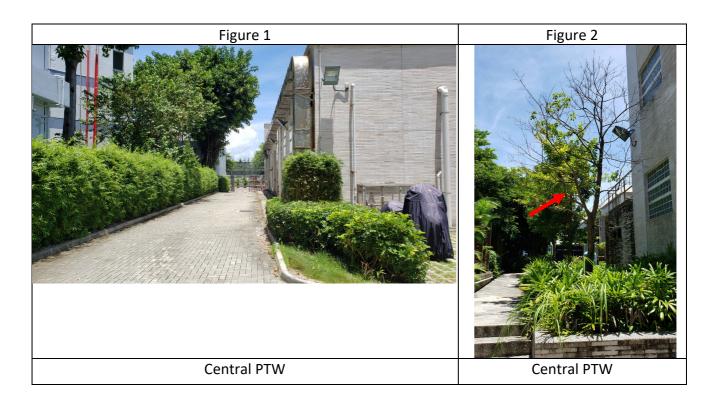
New Observation:

1. The health condition of marked tree (shown in Figure 2) is poor. The Contractor is recommended to carry out remedial action or tree replacement.

Reminders:

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

Photo Record:



		Signature	Date
Inspected & Recorded by	Registered Landscape Architect	Xylem**	4 th July 2022



<u>Landscape and Visual Impact Assessment Checklist for Site Audit – Wan Chai East PTW</u>

Inspection Date: 24 June, 2022 Weather: Sunny/ Fine/ Cloudy / Rainy
Time: 12:21 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)?				



Follow up action taken by Contractor for previous comments:

- No visible irregularities were found

The contractor was reminded to rectify the following:

- N/A

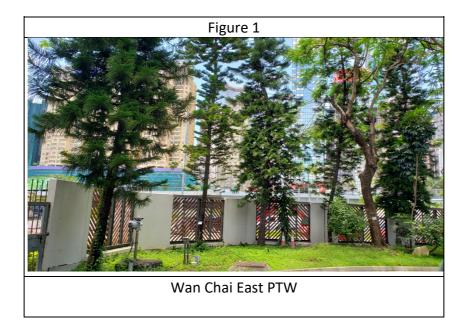
New Observation:

- N/A

Reminders:

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

Photo Record:



		Signature	Date
Inspected & Recorded by	Registered Landscape Architect	Xylem*	4 th July 2022



<u>Landscape and Visual Impact Assessment Checklist for Site Audit – Stonecutters PTW</u>

Inspection Date: 24 June, 2022 Weather: <u>Sunny/Fine/Cloudy/Rainy</u>
Time: 13:05 pm Wind: <u>Strong/Breeze/Light/Calm</u>

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	1			
	surrounding environment?				
1.2	Are the buildings maintained properly that	1			
	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			1	
	properly?			V	
2.3	Are the Shrub and Climbing Plants free from	1			
	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	1			
	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		√		Refer to new
	well preserved?		<u> </u>		observation no.1 & 2.
5.2	Are newly planted vegetations are being		_		Refer to new
	generally maintained during the	ıe 🖠	√		observation no.1 & 2.
	establishment period (12 months)?				



Follow up action taken by Contractor for previous comments:

- No visible irregularities were found

The contractor was reminded to rectify the following:

- N/A

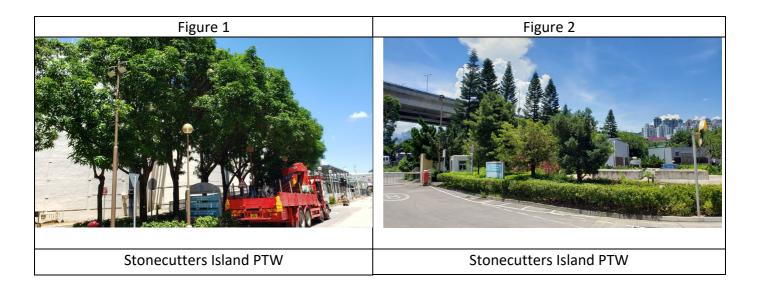
New Observation:

- 1. Some trees adjacent to trees T110 & T109 (shown in Figure 3) are severely tilted. The Contractor is recommended to carry out remedial action.
- 2. Some tree branches span over driveway (shown in Figure 3). The Contractor is recommended to carry out close monitoring or tree assessment.

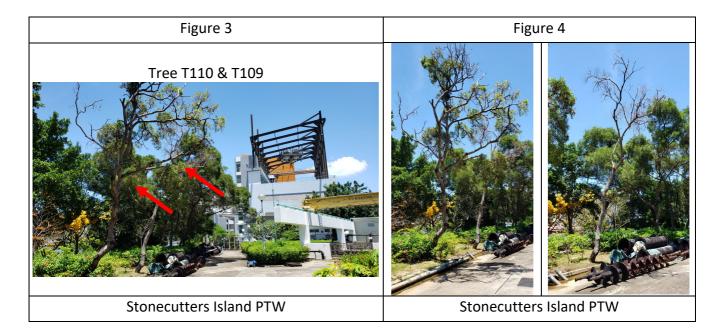
Reminders:

- Vigour of some existing trees (e.g.T110 & T109) are found to be poor. Some adjacent trees are severely tilted. Close monitoring or tree risk assessment may be required.
- Die back of trees is noted. It is recommended that the maintenance party to review the situation and to remove the trees to reduce the safety risk if found to be required.

Photo Record:







		Signature	Date
Inspected & Recorded by	Registered Landscape Architect	Xylem*	4 th July 2022