CONTRACT NO. HY/2019/14

NEW WANG TONG RIVER BRIDGE

UNDER ENVIRONMENTAL PERMIT NO. EP-555/2018

Proposal For Cancellation of Water Quality Monitoring at Station W3

CLIENTS:

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DATE: 20 November 2020

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1 Introduction

1.1 Background

1.1.1 Lam Environmental Services Limited (LES) has been appointed to work as the Environmental Team (ET) under Environmental Permit (EP) no. EP-555/2018 to implement the Environmental Monitoring and Audit (EM&A) programme as stipulated in the EM&A Manual of the approved Environmental Impact Assessment (EIA) Report for New Wang Tong River Bridge (Register No. AEIAR-199/2016).

1.1.2 In accordance with Section 5.2.6 of the EM&A Manual, 8 water monitoring stations (WMS) were proposed along Wang Tong River and in Silvermine Bay. Before carrying out baseline monitoring as conforming EP Condition 3.3, field visit was conducted to investigate practicality of monitoring works. After visit, WMS W3 at Wang Tong River (presented in Appendix A) is considered unfeasible for water quality monitoring. Thus, it is proposed to cancel the water quality monitoring at WMS W3.

1.2 Objective

1.2.1 In order to justify the cancellation of water quality monitoring at WMS W3, the proposal is to evaluate the field conditions at WMS W3 and its vicinity and to study the potential effect and implication on monitoring.

2 Field Conditions

2.1.1 Field visit was conducted on 5 November 2020 by ET. It was observed that the access to WMS W3 at Wang Tong River was obstructed by high-density mangroves. Alternative land access along the upstream of W4 to access W3 is unavailable due to fenced-off area by owner(s).

2.1.2 At the location near to WMS W4, it was found that water depth of the minor tributary at Wang Tong River to Tai Wai Yuen is around 0.3 metres. Hence, it is deduced that water depth in the upstream area, i.e. WMS W3, would be equal to or less than 0.3m.

2.1.3 Appendix B illustrated the field conditions as mentioned above.

3 Evaluation of Potential Effects from Sampling Work

3.1 Disturbance of Bottom Sediment

3.1.1 According to Section 5.2.8 of the EM&A Manual, “as the water depth in Wang Tong River can be shallow, sampling work shall be conducted with caution to avoid disturbing the bottom sediment during movement and water extraction”.

3.1.2 Referring to Section 2.1.2, the water depth of WMS W3 would be equal to or less than 0.3m. Man or boat access to WMS W3 for sampling could considerably impair the water quality due to disturbance of bottom sediment, and hence it is unrealistic for designating any WMS upstream to W4 for water quality monitoring.

3.2 Devastation of Mangroves

3.2.1 With reference to Section 5.2.9 and 5.2.10 of the EM&A Manual, both baseline and impact monitoring shall be carried out 3 days per week. Man access through high density of mangroves associated with frequent sampling work could pose risk of damages to mangroves. The mangroves should be protected from any physical access from perspective of ecological conservation.

3.3 Safety Issue

3.3.1 Working in high-density mangrove near WMS W3 could induce safety issue. Sampling personnel and their equipment would easily got injury or damage when passing through branches of the mangroves. Slippery muddy ground of mangroves would increase chances of falling. This type of work environment is unfavourable for health of sampling personnel.

4 Evaluation of Implication from the Proposed Cancellation

4.1.1 Despite of cancellation of WMS W3, another water monitoring station, i.e. W4, can still be a sufficiently representative monitoring location to present the water quality along minor tributary to Tai Wai Yuen at Wang Tong River.

4.1.2 During the flood tide, WMS W3 and W4 are treated as impact stations. The impact on WMS W4 is more direct than WMS W3 because the flow distance counted form the boundary of construction area to WMS W4 is relatively shorter.

4.1.3 During the ebb tide, WMS W3 and W4 are treated as control stations. Since they are in the same waterbody, WMS W4 can adequately represent the water quality along upstream area of the minor tributary as WMS W3 does.

4.1.4 To be conservative, more mitigation measures will be taken place when exceedance is recorded at WMS W4, so as to ensure water quality at WMS W3 can be safeguarded. Hence, no implication is aroused from the proposed cancellation of water quality monitoring at WMS W3.

5 Conclusion

5.1.1 Cancellation of water quality monitoring at WMS W3 is proposed by the reasons of disturbance of bottom sediment, devastation of mangroves and safety concern. WMS W4 is sufficiently enough to represent the water quality at minor tributary of Wang Tong River.

Appendix A

Location of WMS W3 under EM&A Manual

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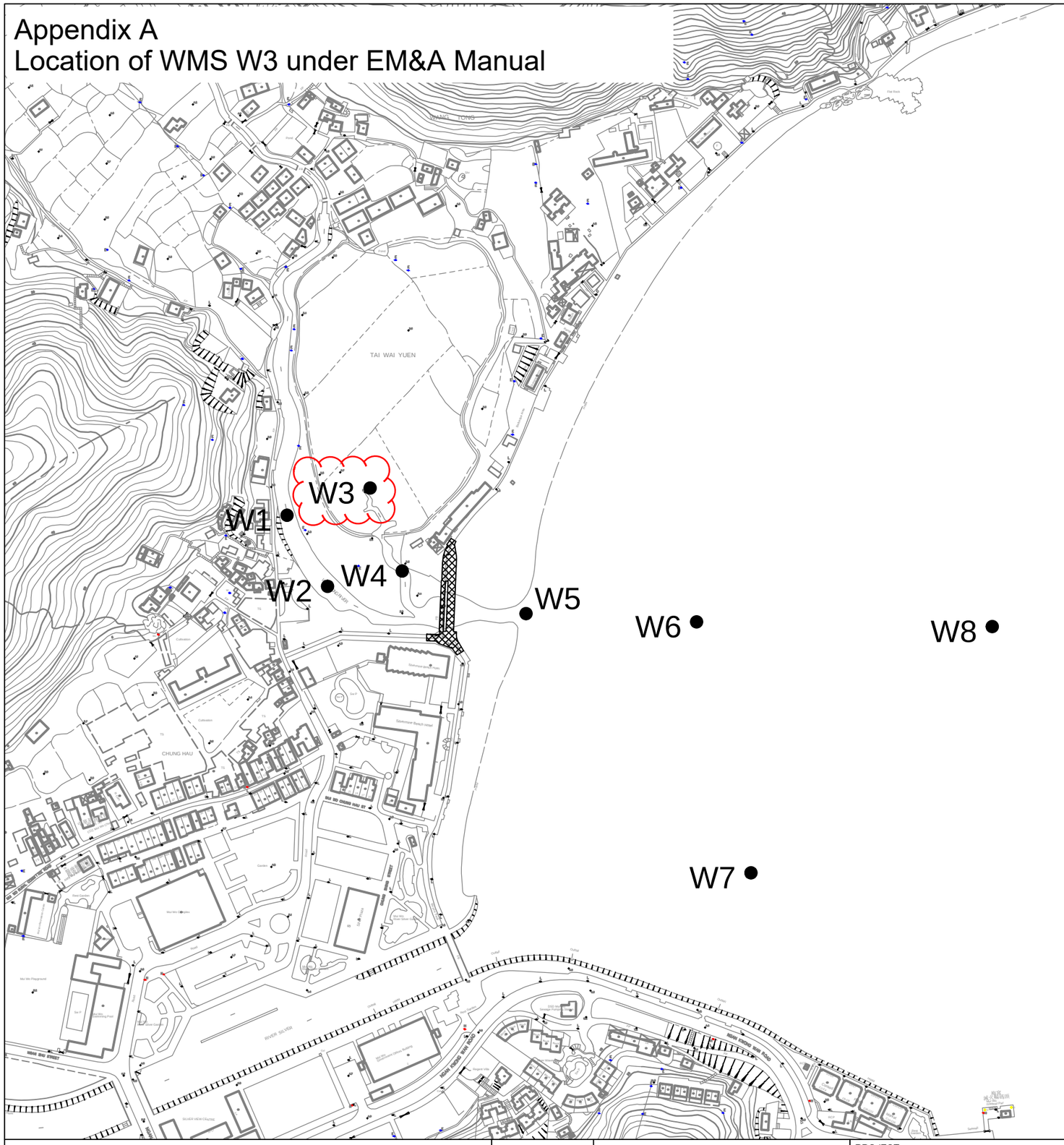
Location of WMS W3 under EM&A Manual



Station	Description	Easting	Northing
W1	Wang Tong River (Major tributary)	817747	814519
W2	Wang Tong River (Major tributary)	817775	814471
W3	Wang Tong River (Minor tributary to Tai Wai Yuen)	817803	814537
W4	Wang Tong River (Minor tributary to Tai Wai Yuen)	817825	814481
W5	Silvermine Bay (Near Silvermine Bay Beach)	817909	814452
W6	Silvermine Bay (Near Silvermine Bay Beach)	818024	814447
W7	Silvermine Bay (Open Water)	818061	814277
W8	Silvermine Bay (Open Water)	818224	814444

LEGEND

Site

Water Monitoring Station

Concerned Location

The joint venture of
Maurice Lee & Associates Ltd. and Cinotech Consultants Ltd.

Works Division
Highways Department

PROJECT:
AGREEMENT NO. CE 14/2014(HY) NEW WANG TONG RIVER BRIDGE, MUI WO - ENVIRONMENTAL IMPACT ASSESSMENT & DRAINAGE IMPACT ASSESSMENT STUDIES - INVESTIGATION

DRAWING TITLE:
PROPOSED WATER MONITORING STATIONS

Drafting by	BC	02/16	SCALE: 1: 3000
Designed by	BC	02/16	
Checked by	IT	02/16	DRAWING NO: FIG 5.1
Approved by	HF	02/16	REV: 1

Appendix B

Photo Records of Field Visit

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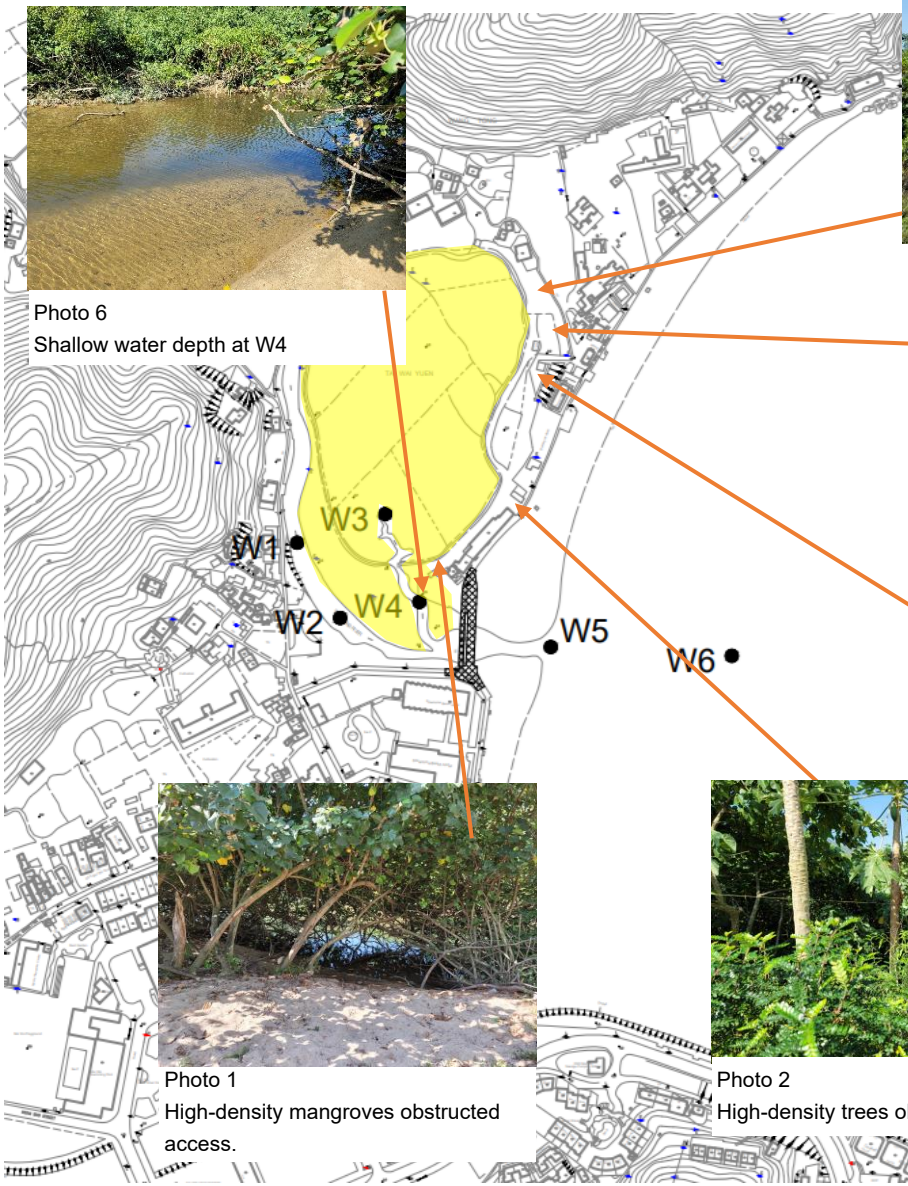

Photo 6
Shallow water depth at W4

Photo 5
Large piece of muddy mangrove ground

Photo 4
Fenced-off area

Photo 3
Mangrove area was being fenced off.

Photo 1
High-density mangroves obstructed access.

Photo 2
High-density trees obstructed access.

Legend:

Mangrove Area